



SLAUGHTERING THE INNOCENT: AN ANIMAL SCIENCE STUDENT ENCOUNTERS THE BEEF INDUSTRY

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Most Americans are familiar with hot dogs, hamburgers and steak, often having these for lunch and dinner. Just driving through most any town one usually sees the familiar McDonald's, Burger King or family steak house. This, though, is usually where the knowledge about the beef industry and the life of the animal who produces this meat stops. I have found that not only do people lack knowledge of the beef industry, they also resist acquiring this knowledge because to many it is unpleasant to think about the life of a cow (especially at slaughter). However, I strongly feel that just because a subject is unpleasant, one should not dismiss it and further should check into the subject, acquire knowledge, and see where changes should be made.

2. BEEF CATTLE BEFORE SLAUGHTER

Breeding

The breeding of beef cattle has become quite a science. Today male and female cattle are selected

very carefully for certain traits, such as leanness of meat their offspring would be expected to produce, and size one would expect from their offspring. Cattlemen now also try to get their female cattle to come into estrus (heat) together so that they can breed them at the same time, so they will calve (give birth) at about the same time. This is often done by weaning calves from their mother at the same time to get the cows to begin cycling together, or this can be done through the use of drugs such as prostaglandin F2 alpha.

Today, natural breeding is on the decline, and artificial insemination is beginning to be used. This is done with a "teaser cow" (a cow in heat) and an artificial vagina (semen collection vessel). Usually the male and female are put together in a small corral, and when the bull mounts the teaser cow, a technician directs the bull's penis into the artificial vagina which collects the semen. Once the semen is collected, it is usually analyzed and mixed with an extender which dilutes the ejaculate to a greater volume. This allows the semen to be used on a greater number of cows. Then the semen is either used immediately or frozen in liquid nitrogen for use at a later time.



COMMENT

Parturition (Birth)

Calving is usually done naturally on the range, but most cattlemen would prefer to be present during birth. This is because oftentimes a calf will not be in the correct position at birth and will need assistance from either the cattleman or a veterinarian. If the calf is in the wrong position at birth, there is a chance that both the calf and the cow will die. Furthermore, calves now have larger birth weights. This too creates problems in the calving process. These larger birth weights are due to cattlemen trying to increase finished weights in an effort to increase profits.

The Calf: 1 Day to 7 Months

In most cattle operations, once the calf is born, it is left to nurse on its mother on the range with little contact with the cattlemen. However, while the animal is still very young, it is castrated, dehorned, and branded. To castrate a calf the cowboy usually ropes the animal, then a number of men restrain the calf as one man slits the young bull's scrotum and rips his testicles out by hand, giving us a young steer. This procedure is done with no anesthesia, since cattlemen say it creates little pain while the calf is still young. To dehorn a calf, the cowboys restrain the calf in much the same manner as when castrating. They then literally pull the calf's horns out of its head. This is done with a tool that clamps on the calf's head and works on the same principle as a corkscrew used to remove a cork from a wine bottle. Once the horns are removed, a hot branding iron is placed over the holes to prevent infection. This is also done without anesthesia, since cattlemen claim this too causes the calf little pain. To brand a calf, the animal is again restrained, and as most people know, a hot iron with the logo of the ranch the calf belongs to is held against the hindquarters of the calf. Again, this is done without the use of anesthesia and supposedly with a very minimal amount of pain. Once these operations are completed, the calf is left to live on the range, nursing on its mother and playing with other calves. At approximately seven months and a weight of 400-600 pounds, the calf is weaned and begins grazing. The calf continues to graze on the range until it reaches a weight of about 700 pounds.

Shipping to the Feedlot

After having reached 700 pounds the calf is rounded up with its herd mates by cowboys and loaded into a semi-trailer. The animals are then shipped to a feedlot. This trip can last up to two days, according to law, before the animals must be released from the truck and given food and water. During shipping most animals lose weight, cattlemen referring to this as "shrink". It is not uncommon for an animal to lose up to 9% of its body weight on a two-day trip. Most of this weight loss is due to dehydration and the emptying of the intestinal tract; however, some weight loss is found to occur in the tissue and bones of the animal. This kind of loss is due to the animal's being in a constant state of fear, referred to as stress. Stressing an animal is putting it in any situation in which it is uncomfortable.

Avoiding such stress, however, is something few producers do during shipping. This is because most producers are very traditional and have a hard time changing old methods. Also, they are often not aware that there is anything that can be done to reduce stress during shipping. Because animals are stressed during shipping, many producers have problems with a sickness called "shipping fever." This is a form of pneumonia that the steer's natural immune system usually has absolutely no problem fighting off. However, during periods of high stress, when the animal's resistance is down, the virus attacks, causing sickness and often death.

The Feedlot

The feedlot is the last stop for the steer before slaughter and also the most intensive aspect of the beef cattle industry. Here the cattle are unloaded from trucks and put into small dirt pens, which become mud when it snows or rains. The cattle are kept here from two to five months until they are approximately 1000 pounds and about a year and a half old. The cattle are given little room for exercise, since this would require energy, and the animal would use feed for energy and body maintenance rather than weight gain. At the feedlot cattle are fed high calorie grain rather than hay because presently grain is very cheap and adds weight to cattle more efficiently than hay. At the feedlot the cow does little more than sleep and eat.

Shipping to Slaughter

At the feedlot cattle are rounded up and loaded onto semi-trailers for their final trip to the slaughterhouse. Again problems with stress (shrink and shipping fever) occur. Another major problem that occurs here is bruising and crippling of animals. A bruise occurs when a blood vessel hemorrhages, and bruised meat is of no value. A bruise can be caused by a hard blow from any object, such as another animal, the door of a truck, or the foot or hand of a cattleman. Crippling is when an animal is hurt during transport and is unable to leave the truck under its own power. This usually occurs when an animal is trampled by other animals during transport. A crippled animal is dragged from the truck and usually is slaughtered first. At the slaughterhouse healthy animals are unloaded into holding pens to await slaughter.

3. AT THE SMALL SLAUGHTERHOUSE

The operation at Jefferson's Processing, Fort Collins, Colorado is similar to a larger slaughterhouse, the only difference being in the number of animals killed and overall size of the operation. Jefferson's kills about 12-16 head of cattle a day, according to Mike Loughlin, the only man on the kill floor.

Upon entering the plant I introduced myself to Shane Thompson, who was expecting me. I was instructed to go wherever I wanted, view whatever I wanted, but to be careful, stay out of the way, and bring any questions to him.

With this I went to the rear of the building where nine cows were kept in individual stalls. I observed the first animal being herded from its stall to the initial chute outside the building. The animal walked into this chute with little encouragement from the kill man. At this point the animal decided it did not want to go into the building. The kill man touched it on the rear-end with a hot shot (an electrical instrument which shocks the cow, also called a cattle prod). The animal moved forward a few inches but then backed up. The kill man shocked the animal several times with the same result. With this, the kill man became angry and began to curse at the animal and then proceeded to kick it in the rear. This

achieved the same result--the cow moved forward several inches and then backed up again. After this the kill man placed the hot shot on the animal's rear and would not remove it. The animal continued to move back and forth and moan in pain. It then tried to jump out of the chute, rearing up on its hind legs, finding no way out. With this the cow seemed to decide that it would be better off going forward and trying to get away from this man. Upon entering the building the door was shut behind the cow, and the animal found itself in a pen in which it was unable to move. The animal was frightened and would not look at the kill man as it tried to hide its head. The kill man approached the animal with a pistol and tried to position it. He had difficulty doing this and poked the cow with the gun several times. Finally I heard a loud blast and then saw the animal fall to the floor of the kill cage. The kill man opened the cage, and the animal fell to the floor, which was about a foot lower than the kill cage. The animal was immediately hung from the ceiling. This was done by placing chains around the animal's rear feet and then a hoist lifted the animal. Once this was done the kill man exclaimed, "Shit, this one ain't dead yet," and without shooting the animal again, he slit its throat and bled the animal.

I felt that this cow seemed to know it was in a bad situation. Going into the chute, this animal had a look of terror in its eyes that seems impossible to describe. Once in the chute the animal seemed petrified. It seemed to me the animal knew that something bad was going to happen.

The kill man seemed like a nice person, before seeing his actions with the cow, and afterwards was nice enough towards me. Despite this I can honestly say that when he picked up the gun, he had a scary look about him which gave me a chill, for the cow's sake, but also for my own.

I had worked in a veterinary hospital for many years as a veterinary assistant and have been involved with the euthanizing of many animals. Due to this I have seen death in animals and dealt with this before, but somehow this seemed different. I believe a small part of this was due to the use of a gun to kill the animal, in contrast to a syringe when euthanizing a dog or cat. I know that a gun is dangerous and is capable of killing, but I had never

actually seen the power of a gun demonstrated, as I did at the slaughterhouse. Another part of the reason this killing may have seemed different is that the animal was killed for humans to eat rather than for its own good, as one tends to believe when euthanizing an animal. As for a simple, hard and fast reason for why the slaughter of a cow bothered me, I do not know; it just seemed wrong to see a healthy, good-looking animal killed.

For the most part the four animals I saw slaughtered at the slaughterhouse had similar reactions when being put into the chute and then into the kill cage, with slight variations in reactions and personality. For instance, one cow was so afraid of the kill man that it ran into the chute while being chased; once it found that it could go no farther, it reared up and tried to back out. When it finally found that it was unable to escape, it seemed to give up and just tried to hide its face. Overall, all four cows had a look of terror and showed this terror by their actions.

What was done to the animal after it was killed seems trivial, but the carcass was hung by its hind legs, and its throat was cut to bleed the animal. The animal was then put on a skinning rack and skinned. The carcass was then hung again by its rear legs and cut into halves. It was next weighed and put into refrigeration to be cut into steaks, hamburger, etc., after the aging process was completed.

4. A LARGE SLAUGHTERHOUSE

Monfort, of Greeley, Colorado is capable of killing 5,500 head of cattle a day and kills over 1.5 million a year. According to Temple Grandin of the University of Illinois, Monfort is one of the better run slaughterhouses, from a humane point of view, and employs some of the best people and equipment in the business (some of the equipment was designed by Ms. Grandin).

To tour the meat-packing plant I phoned Paul Clayton and attempted to set up an appointment. At first he was hesitant because he said there was some equipment he did not want his competitors to read about. After I assured him that he would have nothing to worry about, he agreed to set up an appointment.

When I arrived at Monfort for my tour I was stopped at the security building. I told the guard of my business, and he instructed me to park my truck and come into the security building. Once in the security building, he called Mr. Clayton and then sent me in to meet him.

Mr. Clayton brought me to his office, where he gave me a hard hat and a work jacket to wear during the tour. In his office he told me a little about Monfort's capabilities and about a new feedlot that Monfort planned to open in Yuma, Colorado. We then went outside to the cattle holding pens, where there were well over a hundred cattle and more constantly being unloaded from trucks. Mr. Clayton admitted that their holding pen system was somewhat "archaic" because they constantly had to move cattle. But he was proud to say that plans for a new holding pen system were being made.

We then walked through one of the pens to get to the ramp leading the cattle into the building. When we walked through the pen, the cows were immediately intimidated and got as far away from us as possible (it seems hard to imagine a 1000 to 2000 pound cow being afraid of a 200 pound person). Mr. Clayton then pointed out the two men in rain gear, as it was raining and snowing, slowly moving the cattle toward the chute. He emphasized that this was done slowly so as not to injure the animals or stress them. He also mentioned that the cattle were on concrete because law dictates this, and because of this the cattle had to be moved very slowly. The animals followed up the chute with little problem, for cattle are herding animals and will follow the leader. The ramp leading into the slaughterhouse had a slight curve in it, so the animal could not see what was in front of it until halfway up the ramp; thus the animals herd better.

We then walked up the chute alongside the cattle and saw a man who had a cattle prod and whose job it was to keep the cattle moving up the ramp. As we entered the building there was a man immediately inside the building whose job it was to herd the animals into the conveyor system. The conveyor system was a contraption that was about the width of a cow at the top and was tapered down to a width about half that of the cow's body but with no floor, so the animal's feet hung through. As the animals

were forced to jump into this, they were moved along to the next station, where a man had a contraption that works on the same principle as a gun, except the bullet could be removed and used again: this is called a captive bolt. The captive bolt machine is a free-moving hanging assembly. The way the cow was killed was that a bolt was shot into its head just above and between the eyes from the gunlike assembly and then removed. The animals were secured in the conveyor system and were unable to move their bodies other than their heads. As at the smaller slaughterhouse, the animals were very vocal. But other than that similarity, the operations were very different.

As an animal was moved to the kill man, it was immediately shot twice in the head. Immediately after being shot, blood shot up a few inches from the cow's head, and then its head immediately dropped. In the approximately five minutes that I was in the kill area, I saw nearly 10 animals killed. For the most part the kill man was accurate and most of the animals were immediately stunned. However, there was one cow that was not immediately stunned by the first shot. This animal went into what looked like convulsions as it flopped its head around, violently groaning in pain and shooting blood around the area. The kill man tried several times to get the second shot off but was unable to do so until about twenty to thirty seconds later, when the animal began to calm down.

At this point in the smaller slaughterhouse the rest of the operation seemed trivial. At Monfort it was incredible to see the rest of the operation. The assembly line continued, and each person had his own job in the operation, which he did throughout the entire shift.

Below the conveyor system that held the cows suspended were two men with chains whose job it was to shackle the animals. As soon as the animal was dead, these men immediately hooked a chain around the hock of one leg of the animal. At this point the chain began to tighten and the animal's carcass was dumped out of the conveyor system in one fluid motion as the animal was hoisted into the air. Although the animal seemed to be dead at this point, there were many muscle spasms as the animal was hoisted, giving it the appearance of still trying to escape.

Once the animal was hoisted, the next person in the assembly line was a little Mexican man who had somewhat of an indescribable, crazed look about him. This could have been due to the twelve-inch knife he had in his hand or the fact that he was covered from head to toe in blood. This man's job was to slit the throat of every cow that came to him and bleed the animals.

Continuing in the assembly line the animal carcass was then sent on to a man who began the skinning process by peeling the hide away from the animal's head. The carcass was then sent over to a man who pulled the hide down farther and then inserted it into a machine which stripped the hide from the carcass of the animal. The next step in the assembly line was a man who cut off the lower parts of the legs of the cow and then threw those in a bin. The next man cut the heads off the animals and put them on stakes. When looking at this area of the slaughterhouse, it looked like the entrance to a headhunter's village. It was rather scary seeing the heads of the animals staring at you with no skin to cover the flesh and eyes just dangling by what looked like a thin cord. The next step in the assembly line was the cutting away of the fat and bruised tissues. The carcasses were then cut in half by men on a platform with large saws. After this the carcasses and the guts of the animals went through the U.S. inspection lines which were supervised by a veterinarian. These people checked through the guts of the animals and looked for anything that could create a health problem. After passing through this step, the carcasses were sent to a station where they were shocked by an electrical current to set the meat for refrigeration and then put into a large refrigeration room. From this room the carcasses would be sent out the next day to supermarkets, the aging process taking place once the meat is packaged.

From a humane point of view, Monfort seemed much better than the small slaughterhouse. Of course, there is no way to tell if things run as smoothly when there are no visitors, but overall, Monfort was run well, as expected. Although Monfort was well run, the thing that really hit me while viewing their operation was the number of animals killed in such a short time. As soon as one cow was killed, there was another one directly behind it. Most probably at this very moment there

is a cow at Monfort being killed and one waiting its turn in the conveyor system. This is not to mention the other slaughterhouses across the country.

5. PROBLEMS AT THE SLAUGHTERHOUSE

Problems for the Animals

In the United States there are approximately 7,000 slaughterhouses, half of these being large or medium in size. In the previous sections, a small and a large slaughterhouse were described. However, this by no means shows how all animals are killed in this country. One method not shown previously is electrocution, which renders an animal unconscious temporarily. However, it should be noted that if the animal is not immediately bled, it will regain consciousness. Another uncommon method is the use of CO₂ gas, and finally, in some slaughterhouses in the U.S., according to Peter Singer's book Animal Liberation, the poleaxe method is still in use. This method was described in Upton Sinclair's 1906 novel The Jungle:

Creatures were imprisoned, each in a separate pen, by gates that shut, leaving them no room to turn around; and while they stood bellowing and plunging, over the top of the pen there leaned one of the "knockers" armed with a sledge hammer and watching for a chance to deal a blow. The room echoed with the thuds in quick succession, and the stamping and kicking of the steers. The instant the animal had fallen, the knockers passed on to another; while a second man raised a lever and the side of the pen was raised and the animals, still kicking and struggling, slid out to the "killing bed." Here a man put shackles about one leg and pressed another lever and the body was jerked up in the air. Finally, the animal was bled by a single quick cut of the knife.

Upton Sinclair's novel pointed out so many problems in the slaughter industry that it prompted a government investigation. This investigation, however, dealt with the problems of those people

who worked in the slaughterhouses and not those of the animals. Consequently the poleaxe method is still in use today.

According to Temple Grandin, 25% of the slaughterhouses in the U.S. are excellent, that is, well run, caring for their animals and their employees, and using the best equipment available. Monfort of Greeley is one of those in the top 25%. She went on to say that 10%-15% are terrible, with no regard for the animal or the success of the business. Geographically, the slaughterhouses in the northern states are usually run better than those in the southern states, both from an economic and a welfare point of view. Grandin also says that slaughterhouses in rural areas are also usually run better than those in cities, since the people working in them are generally more in touch with the animals. Overall, large slaughterhouses are better run than smaller ones, due to closer supervision of employees.

Problems for the Employees

Recently on a television news show, "20/20," meat packing was called "the most unsafe job." According to the Bureau of Labor Statistics, the meat-packing industry has been the most dangerous industry for five years, with three times the rate of injuries of other manufacturing jobs.

"20/20" discussed I.B.P., the nation's largest meat packing company, with sales of \$6.8 billion in 1986 and 18,000 employees at 15 plants in eight states. I.B.P. would not allow cameras inside the meat packing plant, but "20/20" gave facts from an Occupational Safety and Health Administration (OSHA) report that proposed fining I.B.P. \$2.59 million (a drop in the bucket, considering I.B.P. grossed \$6.8 billion in 1986) for under reporting injuries. According to the Chicago Tribune, Rita Christian, an employee at I.B.P. for 12 years, states, "I don't think I know anybody there who hasn't been hurt."

In late 1987 nearly 2,300 production workers were on strike at I.B.P. and were demanding higher wages and safer working conditions. Employees were upset because I.B.P. had cut wages but increased production levels. They were also upset because I.B.P. failed to report 1,030 on-the-job

injuries (according to the Chicago Tribune), such as knife cuts, concussions, burns, fractures, hernias, and Carpal Tunnel Syndrome, a disease which leaves a person's hands with little to no strength. From this example it seems obvious that stricter regulations and enforcement are necessary in the meat production industry.

6. SOME NECESSARY IMPROVEMENTS IN THE BEEF INDUSTRY

About Castrating

Castrating of young bulls is something cattlemen have always done and something they are reluctant to stop. They claim that the bulls are more aggressive and produce undesirable meat. Dr. John Edwards, formerly of Colorado State University's Animal Science Department, often told a story of a Colorado rancher who did not castrate. He stated that this man had few problems with his bulls and that good management is the key to working bulls as opposed to steers. As for bull meat being less desirable, most ranchers claim that it has less fat content and an undesirable color. Today, consumers want leaner meat, and as for color, today many health food stores sell bull meat for higher prices than meat from castrated animals. So it is possible that consumers could deal with the changes. It may be harder for ranchers to deal with change; however, if ranchers feel castrating is necessary, use of a local anesthesia could decrease pain. Of course, use of anesthesia would add extra cost, but this could be offset by decreasing the stress placed on the young animal. On the other hand, by eliminating castration altogether, labor costs would be cut.

About Dehorning

Dehorning is often done to prevent cattle from injuring each other. A much simpler solution is to breed cattle that will not have horns. Breeding polled cattle (animals that naturally or genetically do not have horns) is possible and an easy solution to the inhumane practice of removing horns. This would also cut labor costs, since it no longer would be necessary to remove horns from cattle.

Branding

Branding is also a technique that has been around for a long time. Branding was and still is done to prevent cattle from being stolen. Today, cattle rustling is still found in the United States. Thus, it seems necessary to brand cattle. A possible aid in making the branding of cattle more humane would again be the use of a local anesthetic. Again, cost would be an issue with ranchers, but we are dealing with living, breathing animals, not machines. If people choose ranching as their livelihood, they should understand this and be willing to make their animals' lives tolerable. Further, with today's technology it seems probable that a more humane method could be devised to identify cattle.

Treatment

Most any cattleman knows that if he treats his animals better, he gets a better return at sales time. However, ranching is a very traditional business, and ranchers are not quick to change their ways. This is evident from a story often told by Dr. John Edwards: "I went to a ranch as a consultant, and the first thing I told the owner was that he would increase his profits if his men stopped cowboying the animals." The owner's reply was, "Most of my men wouldn't be in the business if they couldn't cowboy the animals. Hell, I probably wouldn't be in it either!"

Stress is often talked about by cattlemen as something they would like their animals to avoid. If they are serious about this, Temple Grandin recommends the following:

- Do not harm or frighten cattle, since they remember painful and frightful experiences.
- Raise animals in close proximity to people, and they will be more willing to approach people.
- Don't yell and scream at livestock.
- Let animals follow the leader, and they will seldom hurt themselves.

- If an animal is raised in a pleasant environment, it will react better to handling.
- Animals are easier to handle if they are trained to come into corrals for feed or water. They learn that corrals are not always unpleasant.

By making a few simple changes not only will cattlemen be treating their animals better, they will be increasing their profits.

Shipping

Shipping can be a very stressful time for cattle, which are often in transport for up to two days. Overcrowding cattle in trucks is a major source of bruising. Temple Grandin states that overcrowding a truck by one to two cattle can cause double the bruising. She also states that loading and unloading of cattle is a major source of bruising, especially when doing so from the side of a truck. When loading cattle into or out of a side door, she recommends a 20 degree slope into or out of the truck, with cleats for better footing. Ms. Grandin also recommends a single-file ramp with solid sides, so cattle cannot see over the sides of the ramp. The most important change, however, is that of the size and shape of the door. This should be 42 inches at the top and mid section and tapered towards the bottom to a width of 30 inches. This would prevent cattle from injuring themselves on the door as they are forced to make an immediate turn inside the truck.

Other improvements include exposing animals to noises they will hear during shipping prior to shipping. When moving animals, Ms. Grandin also recommends using a plastic garbage bag on a broom stick in place of the electrical cattle prod. This could reduce pain and stress for cattle, as well as eliminate the cost of the electric cattle prod. These few small changes could both enhance the lives of the animals and increase the profits of the rancher.

Bruising

Currently, bruising costs the cattle industry \$46 million a year in meat that must be thrown away. Two-thirds of this bruising occurs during loading of

cattle in and out of trucks, according to Temple Grandin. Surveys reveal that rough handling at feedlots is a major cause of bruises and that 50% or more of severe bruises are caused by careless or rough handling.

Feedlots

The cattle feedlots of today are large animal factories that feed as many animals to a finished weight as possible for the lowest price possible. Feedlots came into use when it became cheap for cattlemen to feed cattle grain. Feeding cattle grain is not without its problems, though. The cow is a ruminating animal with four stomach compartments. This means that cattle can eat hay and grass which provide no nutritional value to humans. Cattle can do this because they have bacteria in their digestive tract which change these feedstuffs into usable protein. However, cattle's digestive systems are not made to digest the grains currently fed at feedlots. Because of this grain feeding today in the U.S., we have \$9 million lost to liver condemnations each year, according to Peter Singer's and Jim Mason's Animal Factories. It would be a good idea to turn the cattle back out on the range to feed on grass and hay the way nature intended.

This, however, does not seem to be something that will be done in the near future. Some improvements that could be made in the present feedlot system would be to treat animals pleasantly, making sure all cattle pens are in good shape (no broken gates or boards for cattle to injure themselves on) and getting rid of shadows and puddles in areas cattle will be herded through, since these often spook the animals. Two other changes could also be beneficial to the present system. First, feed cattle hay along with grain, to allow rumination. Second, train a few cattle as leaders. This could be done by keeping a few cattle on hand who are used to people, will approach people, and do as they are told. This could be beneficial, since other cattle would see the animals unafraid of humans; thus, they would not see people as a threat.

Slaughterhouse

As mentioned earlier, according to Temple Grandin, today in the U.S. approximately 25% of the

slaughterhouses are excellent, with the best personnel and equipment. This leaves 75% of the industry somewhere other than this excellent rating. There is definitely room for improvement in the beef cattle slaughtering industry. A starting point would be stricter rules and enforcement of rules at the slaughterhouse. Although there are rules and regulations that slaughterhouses are supposed to follow, it has been shown that well over 75% of the industry's slaughterhouses are never inspected. Closer inspection seems necessary, both from an animal point of view and an employee's point of view.

Besides outside regulatory controls, it would benefit most slaughterhouses to regulate themselves. Temple Grandin has stated that the most important aspects of running a slaughterhouse well, from animal and economic points of view, are using good equipment and having good employees, managers, and owners, i.e., people who care about the welfare of the animals and do not stress them. Humane methods are best economically, since as animals are treated better, carcass traits such as yield and grade improve.

Other improvements the slaughterhouse could make would be to ensure that their people work animals into chutes slowly, so as not to stress them. Also, slowing down the process after killing the cattle would increase employee safety. If this is not possible, it would be a good idea to put more people on the assembly line, so that employees could keep up with the process.

Another suggestion from Temple Grandin that would improve the treatment of cattle would be for slaughterhouses to buy cattle on a carcass weight as opposed to live weight basis. This means that cattle would be paid for after slaughter, and reduction would be made for bruises. Current studies have shown that cattle purchased on carcass weights as opposed to live weight have had half as many bruises and thus half as many reductions. This is because as producers realize that they will be penalized for bruised meat, they change their operations to care for the animals better.

Create New Strains of Cattle

In Animal Rights and Human Morality, Bernard

Rollin contends that, "If proper care is not economically feasible, perhaps we need to turn our attention to breeding food animals that are essentially devoid of interests, incapable of physical or behavioral suffering, and basically enjoy mere protoplasmic existence. We might breed microcephalic animals or perhaps clone sides of beef." Although this may seem somewhat off the wall at first glance, it is not unfeasible. According to R.S. Gowe, Director of the Animal Research Institute, "At the animal institute, we are trying to breed animals without legs and chickens without feathers." Instead, it might be better to breed animals without a desire to move or fly or see or hear. If this were done, the animals would no longer have interests, and it would seem acceptable to do whatever one wants with an animal that has no interests.

7. CONCLUSION

In the previous pages I have tried to show the beef industry as it actually is. Personally I would prefer that the numbers of animals slaughtered each year decrease and that less meat or no meat were in our diets. Further, I would like to see animals taken out of the feedlot and turned out on the range as a more natural alternative. Also, slaughterhouses need stricter regulations and enforcement of regulations.

I believe that most beef producers are interested in making their animals' lives more pleasant and increasing profits. I have tried to show how these can work together. However, if I am wrong, then I believe that scientists must strive to create animals devoid of interest. Then, in effect, an animal would be a vegetable, and it would be acceptable to do whatever one wants with the animal.

I do believe that those who try to avoid the unpleasantness of the beef industry should accept these practices, change them, or take meat out of their diets. Pretending all is well does not mean it is.

