

REPORT OF THE CORPORATE RESPONSIBILITY COMMITTEE OF THE BOARD OF DIRECTORS OF McDONALD'S CORPORATION

*Regarding the Feasibility of Implementing
Controlled Atmospheric Stunning for Poultry
Purchased for Use in McDonald's Restaurants in the United States*

November 19, 2009

INTRODUCTION

In November, 2008, People for the Ethical Treatment of Animals (“PETA”), owners of 79 shares of McDonald’s Corporation (“McDonald’s” or “the Company”) common stock, submitted a shareholder proposal for inclusion in the Company’s 2009 Proxy Statement requesting McDonald’s Board of Directors to “issue an updated report on the feasibility of McDonald’s incorporating chickens killed by controlled atmospheric killing* into its U.S. supply chain.” PETA withdrew its proposal after the Board agreed to issue such a report in November, 2009. A previous report on this topic was issued in 2005 in response to a similar shareholder proposal by PETA in 2004 (the “2005 Report”).

As it did in 2005, the Company’s Board of Directors has delegated the responsibility for the preparation of this updated report to its Corporate Responsibility Committee. The Corporate Responsibility Committee consists of four Directors, all of whom meet the independence requirements of the New York Stock Exchange and the Company’s Standards on Director Independence. The Committee acts in an advisory capacity with regard to the Company’s policies and strategies related to issues of social responsibility and as part of its duties regularly reviews the Company’s animal welfare initiatives. In addition, the Committee has recently reviewed and discussed a report prepared by McDonald’s U.S. management that assessed poultry stunning technologies, including controlled atmospheric stunning (the “2009 CAS Study”). The 2009 CAS Study is attached to this report of the Committee as Attachment A.

McDONALD’S ANIMAL WELFARE INITIATIVES AND POULTRY PURCHASING PRACTICES

The Committee and the Board support management’s leadership efforts in the area of animal welfare. While McDonald’s is not directly involved in the raising, transportation or slaughter of animals, we understand the importance of McDonald’s role as a responsible purchaser. In that regard, McDonald’s global supply chain has functioned under the Company’s Animal Welfare Guidelines for almost ten years and has relied on ongoing guidance from McDonald’s U.S. Animal Welfare Council, a panel of independent animal welfare experts. McDonald’s restaurants purchase poultry only from approved suppliers that meet the Company’s quality and safety standards, which includes working to ensure the humane treatment of animals during the slaughter process. It is important to note that McDonald’s poultry purchases account for less than 1.5% of all

* Poultry stunning methodologies are in place to render birds insensible (i.e., incapable of feeling pain) prior to slaughter. There are two basic methods to stunning – electrical and controlled atmospheric. PETA refers to controlled atmospheric stunning (“CAS”) as “controlled atmospheric killing”.

poultry purchases in the U.S. per year. Currently, virtually all U.S. poultry processing plants, including McDonald's U.S. suppliers, use low voltage electrical stunning systems.

2009 CAS STUDY

The 2009 CAS Study provides a concise review of poultry stunning methodologies and expert opinions in this regard. The Study also describes tests conducted by U.S. suppliers to compare the effectiveness of CAS and low voltage electrical stunning methods. We believe the comparative testing described in the Study provides a balanced assessment of these methods from an animal welfare perspective. We agree with the findings that both methods are effective if well-managed, and that both methods could be improved by further research and development. McDonald's U.S. presented the 2009 CAS Study to the Animal Welfare Council, to ensure that the Study is a balanced representation of this issue.

CONCLUSION

Based on our review of the 2009 CAS Study and discussions with McDonald's management on this issue, we have concluded that the Company's current animal welfare standards for U.S. poultry suppliers are appropriate. We believe it remains premature to require our suppliers to convert to an emerging technology prior to a conclusive determination that it is clearly optimal from an animal welfare perspective. We are confident in the commitment by McDonald's U.S. management to continue to monitor CAS technology as well as its commitment to encourage U.S. McDonald's poultry suppliers to continue to investigate and support the development of commercially-relevant and sustainable technologies and standards for animal welfare, including stunning technologies for poultry.

**McDonald's Controlled Atmosphere Stunning Feasibility Update Report
With a Comparative Assessment of Poultry Stunning Technologies
for the USA Business**

November 19, 2009

McDonald's Animal Welfare Program

McDonald's has a longstanding, publicly-recognized global commitment to animal welfare. Since 2001, our global supply chain has functioned under broad Animal Welfare Guidelines.¹ We have since issued more specific standards that articulate our expectations for direct suppliers, including the processing plants that provide poultry products for our restaurants. First, second and third-party audits verify adherence to our standards and promote continuous improvement.²

Animal welfare is one element of a much broader global commitment to supply chain sustainability. We have formalized this commitment in a global vision and set of principles for achieving an efficient, profitable supply chain that leverages our leadership to improve ethical, environmental and economic outcomes.³

We view supply chain sustainability as a journey with a purpose—a process of continuous improvement based on evolving research, technology, collaboration with our suppliers and learnings from best practices at the local level. For animal welfare, we also rely on information and ongoing guidance from our U.S. Animal Welfare Council, a panel of independent animal welfare experts.⁴

Global Background

Our global animal welfare standards require that “animals be rendered insensible (so as not to experience pain) prior to and during the slaughter process.”

Consistent with our commitment to continuous improvement, we began exploring the feasibility of controlled atmosphere stunning (CAS) not long after our Animal Welfare Council was established in 2000.

¹ The Guiding Principles are available online at http://www.crmcdonalds.com/publish/etc/medialib/mcdonalds_media_library/report/downloads/Animal_Welfare_Guiding_Principles.Par.0001.File.tmp/McD_AnimalWelfareGuidingPrinciples.pdf.

² More than 3,500 onsite audits have been conducted since we initiated the program. In both 2007 and 2008, these included all U.S. poultry plants in the McDonald's supply chain.

³ For more information about this framework and how we are implementing it, see the Sustainable Supply Chain chapter of our 2008 Worldwide Corporate Responsibility Report, http://www.crmcdonalds.com/publish/csr/home/report/sustainable_supply_chain.html.

⁴ A roster of current Council members, with their credentials is available at http://www.crmcdonalds.com/publish/csr/home/report/sustainable_supply_chain/animal_welfare/mcdonald_s_animal.html.

In 2004, we expanded and updated our review of the relevant research, practical options and the experience of our European suppliers who were using different CAS systems. The results were summarized in a 2005 report issued by the Corporate Responsibility Committee of our Board of Directors, along with conclusions by McDonald's management.

The report concluded that "CAS has potential" but that, "given the remaining unanswered questions, it would be premature to require the adoption of what is still an emerging technology." The report also directed staff to continue learning more about CAS and, more generally, "the animal welfare implications of different stunning systems and potential for improvement."

Following the direction of our Board, over the past four years, we have closely monitored the evolving research on CAS and other alternative stunning methods. We have also periodically reviewed the issues with our U.S. Animal Welfare Council, other independent experts, our own global supply chain experts and key poultry suppliers. Globally, we continue to support both electrical and controlled atmosphere stunning, while advocating continuous improvement in each system.

Overview of Report

In 2007, our U.S. business decided to take a further step toward assessing the relative merits of CAS and the electrical stunning method used by most U.S. poultry processors, including our suppliers. We invited two of these suppliers to collaborate with us in systematically testing a CAS system.

This report will briefly:

- Characterize available stunning methodologies.
- Update our review of expert opinions.
- Summarize the current regulatory situation.
- Describe the methods and findings of the tests conducted by our U.S. poultry suppliers.
- Present our conclusions and plans for the future.

Stunning Methodologies

Most modern poultry processing plants render birds insensible—that is, incapable of feeling pain—prior to slaughter.⁵ This process is known as stunning. There are two basic technological approaches to stunning—electrical and controlled atmosphere stunning.

Electrical Stunning

In any electrical stunning system, birds must first be unloaded from the crates in which they are delivered to the processing plant. They are then transferred to a moveable

⁵ As discussed below, plants that process according to kosher standards and some that process according to halal standards are exceptions.

processing line and conveyed through a water bath with an electric current that stuns the birds rendering them insensible to pain prior to processing.⁶ Seconds after stunning, the birds' necks are cut by an automatic blade that severs the primary blood vessels or the heads are removed by an automatic blade.

In electrical stunning systems animal welfare concerns have been raised about the unloading and transferring processes, as well as the potential for birds to receive a "pre-stun shock," (*i.e.*, a shock delivered to a wing before the head shock that renders them insensible) when these systems are improperly managed.

Early electrical stunners were inefficient, so high voltage systems had to be employed to achieve reliable results. The high voltage caused not only a loss of consciousness, but heart failure. Such "stun-to-kill" systems are not in use in the U.S. industry. High voltage systems cause physiological reactions that can negatively impact meat quality. This combined with animal welfare concerns, prompted research into the use of alternative stunning methods (e.g., low voltage electrical stunning systems and CAS).

Virtually all U.S. processing plants use low voltage electrical stunning systems,⁷ which render the birds insensible to pain. McDonald's U.S. suppliers utilize a dual-phase electric stun with both AC and DC currents; this system self-regulates based on the number and size of birds to maintain low voltage stunning conditions.⁸ McDonald's requires a minimum stun efficiency rate of 98% and continues to work with suppliers to optimize performance. A staffed operator observes all birds to ensure 100% kill before birds enter the scalding.⁹

CAS Systems

CAS systems achieve insensibility by exposing birds to an inert gas (nitrogen, argon or a combination of the two) or to a high concentration of carbon dioxide. Birds are moved into compartments that contain the gas or gases. The end result is loss of consciousness, followed by brain death.

Several systems in commercial use, including the one we tested, seek to minimize the distress of not being able to breathe by phasing in the gas or gas mixture.

In some systems, crates are placed on conveyor belts that move birds into compartments where they are exposed to the gas or gas mixture. In other systems, birds are unloaded from the crates for inspection and then either moved loosely into the gas compartment or shackled and transported into the gas compartment.

⁶ Electrical stunning systems achieve insensibility by wetting birds' heads in a brine bath and creating an electrical circuit between their heads and the shackle holding their feet.

⁷ In the U.S., there is only one Commercial CAS system being used in broilers – as part of a niche market – processing approximately 0.2% of the broilers industry wide.

⁸ McDonald's U.S. tests, therefore, were comparing CAS to low voltage electrical stunning.

⁹ The purpose of the scalding is to loosen the feathers from the feather follicles allowing them to be removed more easily without damage to the carcass.

Emerging Technology

Research is under way on another stunning technology—low atmosphere pressure. Essentially, birds are placed in a compartment, and a vacuum is then created by pumping out the oxygen. There is little published research on the animal welfare aspects of this method. However, we understand such research is underway.

Expert Opinions

As in 2005, our current review of the scientific literature indicates that there is no consensus on which controlled atmosphere approach is preferable for stunning. For example, Dr. Mohan Raj, a prominent CAS expert, has argued that inert gases are preferable because they act quickly and without producing distress.¹⁰ Other experts have questioned whether the wing flapping and convulsions inert gases tend to cause occur only after birds are unconscious and whether such activity could distress or injure birds that are slower to succumb.¹¹

According to the UK's Farm Animal Welfare Council, a recent government-sponsored research project identified animal welfare concerns for both inert gas and multi-phase CO₂ systems.¹² Similarly, a 2005 workshop on the merits of different CAS methods concluded that each had animal welfare advantages and disadvantages, but that the differences were not sufficient to warrant a judgment that any was distinctly better.¹³ Dr. Bruce Webster, another prominent poultry stunning expert, has said that he concurs with this view.¹⁴

The broader question is whether either CAS or low voltage electrical stunning offers scientifically validated animal welfare advantages over the other method. Opinions differ here, as they do on the preference of one CAS approach over another.

Some animal welfare experts and advocates favor CAS. For example, Dr. Ian Duncan, Chair Emeritus in Animal Welfare at the University of Guelph, has called CAS “the most stress-free, humane method of killing poultry ever developed.”¹⁵

¹⁰ See, e.g., his 2004 presentation at the U.S. Department of Agriculture, “Welfare, Economic and Practical Implications of Gas Stunning Prior to Poultry Slaughter.”

¹¹ See, e.g., Farm Animal Welfare Council, *Report on the Welfare of Farmed Animals at Slaughter or Killing, Part II: White Meat Animals* (May 2009).

¹² See, e.g., Farm Animal Welfare Council, *Report on the Welfare of Farmed Animals at Slaughter or Killing, Part II: White Meat Animals* (May 2009).

¹³ “Scientific Approaches to Determining the Most Humane Gas Mixtures for Controlled Atmosphere Stunning (CAS) of Poultry,” held at the British Veterinary Association in 2005. Conclusion reported in A. Bruce Webster, “Is Gas Stunning/Killing Ethical?” *Bioethics Symposium: Proactive Approaches to Controversial and Ethical Concerns in Poultry Science* (January 2007).

¹⁴ “Scientific Approaches to Determining the Most Humane Gas Mixtures for Controlled Atmosphere Stunning (CAS) of Poultry,” held at the British Veterinary Association in 2005. Conclusion reported in A. Bruce Webster, “Is Gas Stunning/Killing Ethical?” *Bioethics Symposium: Proactive Approaches to Controversial and Ethical Concerns in Poultry Science* (January 2007).

¹⁵ Cited, in “The Humane Society of the United States Comments on McDonald's Animal Welfare Feasibility Study on Controlled Atmosphere Stunning for Broilers” (June 2005) and other sources.

Similarly, a Humane Society of the United States report by Dr. Raj and Dr. Sara Shields concludes that “ongoing research should not prevent the poultry industry from adopting CAK technology”¹⁶ because it “eliminates the problems associated with handling and shackling live birds, painful pre-stun shocks, and variations in current that may or may not render birds insensible.”¹⁷

On the other hand, Dr. Bernard Rollin, a Professor of Philosophy and Animal Sciences at Colorado State University, has said, “There is no distress as severe as the feeling of not being able to breathe.... Even though CAS creates unconsciousness, there must be a period when the animal feels a sense of suffocation. For this reason, I do not accept CAS as a humane method of euthanasia.”¹⁸

A number of experts perceive potential advantages to CAS but believe a judgment—let alone a mandate—in favor of this method would be premature.

For example, in 2007, Dr. Temple Grandin, world renowned animal behavior expert and a long-time member of our U.S. Animal Welfare Council, and two other animal welfare leaders, Drs. Stanley Curtis and John McGlone, issued a joint statement on some current critical issues in farm animal welfare.¹⁹ On the stunning issue, they said:

Current methods of CAS can solve some handling issues if properly implemented, but they may create new welfare issues. As such, CAS and electric stun systems, in their present forms, are in need of improvement. ...Until we know much more about the causation and function of the behaviors an animal exhibits and the correlated physiological responses in challenging settings, we should not change production systems willy-nilly.

While Dr. Grandin leans toward CAS, she perceives trade-offs between the two methods. She thus writes that “overall bird welfare would be improved with gas stunning even if there is some discomfort before the bird loses consciousness because live shackling is eliminated.” However, if the discomfort causes “most of the birds [to] constantly flap or try to escape from the container, electrical stunning would provide better welfare.” She stresses the need for further evaluations of commercial systems and provides a rating system to be used in direct observations of birds from the time they enter the CAS chamber until they lose posture indicating a loss of consciousness and sensibility.²⁰

In 2008, the Scientific Advisory Committee of the American Humane Association reviewed the issues and concluded that, “based on input from animal science veterinary

¹⁶ Controlled atmosphere stunning is also sometimes referred to as controlled atmosphere killing (CAK).

¹⁷ *An HSUS Report: The Welfare of Birds at Slaughter.*

¹⁸ “American Humane Certified Says Research Is Incomplete on Controlled Atmosphere Stunning (CAS) as the Preferred Method of Poultry Slaughter,” April 9, 2008.

¹⁹ *Feedstuffs Food Link*, July 20, 2007.

²⁰ Temple Grandin, “Animal Welfare Evaluation of Gas Stunning (Controlled Atmosphere Stunning) of Chickens and other Poultry” (updated June 2008).

and ethics professionals ... research is not conclusive or complete at this time to support Controlled Atmosphere Stunning (CAS) as the preferred method of poultry slaughter.”

In its May 2009 report, the UK Farm Animal Welfare Council identified certain advantages to CAS but concluded that its support for this method “is provisional on continuing research and development to clarify implications for bird welfare of any gas mixtures’ effects during induction to unconsciousness.”

The American Association of Avian Pathologists and the American College of Poultry Veterinarians, both allied organizations of the American Veterinary Association, take the position that “pulsed DC or AC low voltage stunning and controlled atmosphere stunning (CAS) are *all* viable and acceptable systems for humane stunning of poultry.” They too recommend continuing research on stunning physiology and further refinement of commercial applications.

Stunning Regulations

The extent and nature of regulations governing poultry stunning vary widely from country to country.

The U.S. Department of Agriculture (USDA) has no such regulations, though it does regulate the stunning of other farm animals raised for commercial production. USDA maintains that it has no authority to regulate the stunning of poultry because poultry is not covered by the Humane Slaughter Livestock Act. This interpretation of the act was recently upheld by a U.S. District Court in a lawsuit challenging the agency's policy.

EU policy has covered stunning since 1979 as part of a directive that animals are to be brought “into a state of insensibility that lasts until slaughter.” However, implementation of the policy was left to member countries. The result was a patchwork of inconsistent regulations, at least regarding CAS. For example, the UK permits only systems using inert gas mixtures, while some other EU member countries ban them. In June 2009, the EU Council agreed on a regulation to help harmonize country-level slaughter regulations. While expressing a general preference for CAS, it continues to permit electrical stunning, noting that current CAS systems are not suitable for small and medium-sized facilities.²¹ For poultry, it bans the use of over 40% CO₂ in slaughterhouses, but otherwise takes no position on gases or gas mixtures.

²¹ The full legal text of the regulation has not been released. The online summary states that “this regulation does not ban any major method of stunning presently in use.” This suggests that both high voltage and low voltage electrical systems will remain permissible.

Religious Dietary Laws

As the EU Council recognized, slaughter regulations can conflict with religious dietary laws.²² For example, for meat to be certified as kosher, animals must be conscious when killed. Thus, no stunning method is permissible.

There are also some stunning methods that are not acceptable for halal standards. Most halal certification bodies permit stunning, but only if it is temporary. In the U.S. CAS methods that cause brain death are impermissible. However, low voltage electrical stunning is permissible because it is not a "stun-to-kill" system. Some restaurants in North America serve halal-certified products. Lastly, there are considerations regarding global integration of our supply chain.

McDonald's U.S. CAS Test

Our supply chain and animal welfare experts have been following new developments in stunning technology as part of our broader supply chain sustainability initiative. In 2007, we decided to work with key U.S. poultry suppliers on actual tests of a CAS system. We wanted to gain first-hand experience and conduct a comparative analysis between CAS and low voltage electrical stunning in the context of a U.S. commercial operating environment.

Selection of CAS System for Tests

The system we selected for our tests was a multi-phase CO₂ system. We were drawn to this system by a unique feature that promises both animal welfare and human welfare benefits. Specifically, birds are stunned in the standard industry crates used to transport them to the plant.²³ This, we thought, would minimize stress and potential injuries while also making it easier for employees to handle the birds.

This CAS system has another important feature with potential animal welfare benefits. It has windows in its CAS compartments, which allow employees to observe birds during the stunning process. Dr. Temple Grandin, among others, has emphasized the need for such direct observation to ensure that the system is "inducing insensibility with a minimum of discomfort."²⁴

A somewhat differently designed commercial system has been used successfully by turkey processors. One of our objectives was to find out whether the modified design this system offered would be suitable for chickens. This was the main focus of our first, or

²² For permissible slaughter techniques, the new EU Council rules make an exception for "cultural traditions and religious rites."

²³ As indicated above, one major system involves unloading birds while they are still fully conscious. Two others require use of special crates. One of these offers a modified version that involves tipping birds out of standard crates before stunning.

²⁴ UK's Welfare of Animals (Slaughter or Killing) Regulations require a means of visually monitoring birds in the chamber.

alpha, test phase. The second, much larger commercial, or beta, test phase focused on comparative assessments of CAS, low voltage electrical stunning and a combination of the two.

Phase I: Off-Line (Alpha) Test

The CAS system used for this test consisted of four stunning stages. Within these stages oxygen is evacuated and birds are exposed to successively higher concentrations of CO₂. This gradual exposure is intended to minimize aversive reactions birds exhibit when immediately exposed to high concentrations of CO₂. Such reactions are understood to indicate discomfort and distress.

Our supplier used the four-stage approach for the alpha test, with birds left in each stage for a minute. Bird reactions were directly observed and recorded. Birds were also examined at the end of the stunning process to identify any birds that were still alive and also carcasses that had broken wings—a sign the birds had reacted to the gas by vigorous flapping.

The alpha test found that:

- Birds tended to exhibit severe wing flapping.
- Birds tended to open-mouth breathe or gasp—another sign of distress associated with exposure to CO₂.
- The CAS system did not completely stun all birds.
- The rate of wing breakage was higher than for low voltage electrical stunning.

These results did not indicate any improvements to animal welfare. As a result, modifications were made to the CAS system for use in our commercial test.

Phase II: Commercial On-Line (Beta) Test

The modified CAS system used in the beta test had five stunning stages so that birds would gradually be exposed to the highest levels of CO₂ and for a longer period of time.²⁵ This system was actually installed in the processing plant so that results could be assessed for a large number of birds and systemically compared to results for birds stunned using the existing low voltage electrical stunning system.

The beta test sought to determine whether:

- The CAS system stunned birds more effectively than the plant's low voltage electrical system.
- Birds experienced more or less distress during the CAS process than if stunned with the low voltage electrical system.
- Employees could immediately identify birds that were dead on arrival as effectively with the CAS system as with the low voltage electrical system.²⁶

²⁵ Total exposure time was seven minutes, as compared to four minutes in the alpha test.

²⁶ This is due to the fact that birds are stunned in the crate for CAS.

- CAS would yield more or less acceptable meat than the low voltage electrical stunning.

The beta test also included a third stunning method—CAS followed by low voltage electrical stunning. Results from the combined method were compared to results of the other methods (CAS and low voltage electrical stunning), using the same measures.

Test Procedures:

The test was conducted over a 16-day period, with the combined method added during the last four days. Pre-determined procedures were used to collect data on each of the variables considered.

Effectiveness:

Our supplier regularly monitors the effectiveness of its low voltage electrical stunning system. During the beta test, this monitoring was expanded to include CAS and the combined CAS-electrical stunning method. At pre-determined time intervals processing plant employees were stationed at the end of the CAS and combined processes to count any birds left unstunned or partially-stunned.²⁷ Results were tallied as a percentage of all birds subjected to each method, by period.

Distress:

Distress during stunning was measured by broken and/or bruised wings and legs. Dead birds were examined after they had been defeathered, when broken bones and bruises would be most visible. A total of about 15,500 birds were examined at various stages of processing—5,500 for CAS, 7,000 for low voltage electrical stunning and 3,000 for the combined method.

Identification of Birds Dead on Arrival (DOA):

Processing plant employees customarily examine birds on arrival to identify and remove any that are dead. This is required under USDA regulations and our own food safety and quality standards. USDA inspectors at the plant perform a separate inspection after birds are defeathered and keep records on any DOA birds that were not identified prior to stunning. These records were another source of raw data considered during our assessment.

Meat Yield and Quality:

Tests were performed on bird carcasses to determine whether the method of stunning affected the amount of meat a carcass would yield and/or its tenderness. These obviously would be important considerations for our suppliers and for us as we seek to continue delivering on our commitment to quality.

²⁷ Only the counting and recording were periodic. As part of our supplier's regular procedures, a minimum of one full time employee examines all birds to ensure they are dead prior to entering the scald.

Test Results:

The beta test revealed that neither CAS nor the combined CAS/ low voltage electrical stunning method offered significant animal welfare advantages over low voltage electrical stunning. More specifically, the data showed that:

- All stunning methods achieved effectiveness rates of well over 99%, while none were 100%.
- The stunning method used had no significant effect on the percentage of broken wings or legs.
- The stunning method used had no significant effect on the percentage of bruised legs.
- A significant difference was observed between stunning methodologies for the percentage of bruised wings, with the low voltage electrical stunning system having 2.81% bruised wings versus 1.42% and 1.68% bruised wings for CAS and the combined method, respectively. It may be worth noting that measurements for bruised wings can not be collected prior to picking (feather removal).
- The CAS system tested does not allow for review of the birds until the stun step is complete and therefore the identification of birds that are dead upon arrival is more difficult. The number of birds identified as cadavers by USDA after the stunning and slaughter process for low voltage electrical stunning was 1.25% versus a cadaver rate of 16.25% and 17.75% for CAS and the combined method, respectively.
- Tests for meat yield and quality revealed no significant difference among stunning methods. Comparative evaluations of other meat characteristics were not a formal part of the commercial test. However, as part of our supplier's regular procedures, meat samples were evaluated hourly for taste, appearance and texture. These evaluations found no differences based on the stunning method used.

Conclusions

As indicated in this report, the results of McDonald's U.S. supplier's comparative tests do not show that either CAS or the combined CAS/low voltage electrical stunning system offers significant advantages over the low voltage electrical system already in use. By all measures, except DOA identification, the differences among the methods were very small. Further, processes associated with low voltage electrical stunning prevent a significant number of DOAs from entering the process.

What seems quite clear is that both CAS and low voltage electrical stunning can be highly effective, if well-managed, and that both methods could be improved by further research and development. As experts cited above have said, there is more to learn about the significance of the physiological responses birds' exhibit when exposed to various gas mixtures. More research here would help determine whether any CAS system in current use is optimal from an animal welfare perspective.

Beyond this, both existing CAS and low voltage electrical stunning systems should be looked at in a broader context that would include all the steps in the slaughter process—from the arrival of birds at the plant through the post-stun examination. We have previously noted concerns about the potential stress and injury birds may incur as a result

of the initial handling and shackling, to which CAS could be a solution. Though keeping them in their crates may be preferable from an animal welfare perspective, our tests indicate that this may prevent workers from immediately identifying birds that are dead on arrival. Dead on arrival birds must be identified to comply with regulatory requirements and the inability to identify these birds may result in an unacceptable level of cadavers identified during processing.

At the same time, we believe research gaps exist in areas that would assist in understanding if either stunning method would result in supply chain sustainability program improvements over the current U.S. method. In particular, we would want to know considerably more about the environmental impacts of these methods.

We must also consider conditions in our local markets, including the suitability of existing CAS systems to smaller processing plants, the availability and cost of supplies and technical support and, as indicated above, regulations and customer preferences based on religious dietary laws.

For all these reasons, our conclusion is to continue to use and support the current electrical stunning systems in place with our suppliers in the U.S. Further, we will continue following the research on both existing and emerging technologies and working with our suppliers to assess new and/or improved systems as they become available.

Regarding animal welfare, as in all areas embraced by our global supply chain sustainability framework, we will endeavor to make informed decisions based on the best science available, work with internal and external stakeholders to understand concerns and opportunities for impact and collaborate with our suppliers to promote continuous improvement.