

2. Establishing a culture of quality, high expectations and continuous improvement.
3. Developing the organizational structure of the business.
4. Building the workforce team and developing and coaching leadership team members.
5. Seeking professional development opportunities to enable him or her to excel in this newer and less familiar role.

A great chief executive provides visionary leadership enabling the business (dairy business) to achieve extraordinary excellence over a

long period of time. The owner can become a great chief executive for their business by making that role the number one priority. Unfortunately, few of us have the discipline to effectively operate as a CE, especially in a part-time role, without some structures to help. We need help maintaining focus on the important but not urgent tasks. Suggested vehicles to implement this priority include establishing a specific time for CE functions, structured meetings, engagement in activities to network with other CEs, professional improvement plans, and techniques for getting our good ideas on paper.

**Key Words:** Strategy, Leadership, Future

## **ADSA-SAD Undergraduate Competition - Dairy Foods**

### **203 Dairy products shown to help reduce blood pressure.**

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Hypertension is a common disorder in which blood pressure remains abnormally high at a reading of 140 over 90 mm Hg or greater. It can be fatal if not detected and treated. Hypertension affects more than one in three American adults; 28% of adults age 18 and older have pre-hypertension. Statistics on hypertension caused the National Heart and Lung Association to begin the DASH Study, a multi-center, randomized clinical study that emphasized fruits, vegetables and fat-free or low-fat dairy products as the ideal diet for reducing blood pressure. The Dietary Approaches to Stop Hypertension Study was conducted in three phases: screening, run-in and intervention. DASH investigators concluded that a balanced diet rich in dairy products is a nutritional approach that can prevent and treat hypertension. They estimate that the DASH diet could reduce coronary heart disease by 15% and occurrence of stroke by 27%. Calcium and potassium are inversely linked to hypertension. Seventy to seventy-five percent of dietary calcium is from dairy products. The DASH diet reinforces the newly updated 2005 National Dietary Recommendations and is the basis for USDA's MyPyramid. The American Heart Association, as well as national guidelines for treatment of hypertension, support the conclusion that increasing dairy products in one's diet will help reduce blood pressure.

**Key Words:** DASH diet, Hypertension

### **204 Influence of low-fat dairy products on colorectal cancers.**

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Each year over 50,000 people die in the U.S. from colorectal cancer, the second leading cause of cancer deaths. The American Cancer Society estimates that in 2007 there will be 112,340 newly diagnosed cases of colon cancer and 41,420 cases of rectal cancer. Most people receive their dietary calcium from milk and milk products. It is thought that calcium binds secondary bile acids and free fatty acids in the colon, which may reduce colonic cellular proliferation. Alvarez-Leon et al. (2006) cited an inverse relationship between the intake of dairy products and colorectal cancer. Slattery et al. (2004) showed that increasing daily calcium intake up to 1200 mg from low-fat dairy products reduced the proliferation of colonic epithelial cells and returned them to normal differentiation. Holt et al. (2001) placed 40 people, all with initial signs of colorectal cancer, on one of two high calcium diets. Both diets were shown to reduce colonic epithelial

cell proliferation. Kampman et al. (2000) concluded consumption of low-fat dairy products was associated with a significant decreased risk of colon cancer in men and women. These findings support an inverse relationship between high calcium consumption and colorectal cancer incidence. As a result of these studies and others highlighting the important role of dairy products in human nutrition and health, the USDA/HHS Dietary Guidelines for Americans 2005 increased the recommended servings of milk/dairy products from 2 to 3 servings per day.

**Key Words:** Calcium, Low-Fat, Colorectal Cancer

### **205 Role of dairy products in combating childhood obesity.**

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Childhood obesity continues as a growing health problem in the United States. Currently, 25% of children ages 8 to 19 in the US are overweight and 11% are obese. Several factors, including limited amounts of exercise or activity and the size of fast food portions, have been identified as contributing to this health concern. Obese youth are at greater risk of developing type 2 diabetes, asthma, and hypertension prior to reaching adulthood. The diets of many American children contain an excess of calories but too little calcium. Over two thirds of American children are not receiving their calcium requirements. Minimum daily calcium requirement of children ranges from 800 mg during their early years to 1,300 mg during the teen years when most growth and bone building is taking place. Several controlled trials have been conducted to explore the relationship between weight loss and dairy products. Most concluded that overweight children consuming a reduced caloric diet that included recommended servings of dairy lost more weight than those who consumed little or no dairy products. The specific mechanism appears to support a role for calcium in weight loss. Specifically, consumption of a low calcium diet results in an increased production of calcitriol and promotes the entry of calcium into fat cells. The calcium in turn inhibits fat breakdown and promotes fat storage. Reducing the incidence of childhood obesity will require a two-pronged approach involving educational programs targeted at helping youth make healthy eating decisions, and motivating them to be more active or exercise regularly. Healthy eating decisions need to address portion sizes and their choice of foods, specifically those that are lower in calories and higher in needed nutrients such as calcium.

**Key Words:** Obesity, Weight Loss, Calcium

**206 The significance of phospholipids and their emerging importance in dairy foods.** R. L. Clarke\*, *California Polytechnic State University, San Luis Obispo.*

Phospholipids are an important biological molecule in milk and milk components. Although minor in quantity comparatively (0.2-1 percent), phospholipids are important in milk fat and widely distributed as components of body cells. They are composed of fatty acids, phosphorous, and contain groups such as lecithin, cephalin, and sphingomyelin. Phospholipids exist in complexes with proteins in milk. Cream, separated from milk, contains about 65% of the lipid bound phosphorous and because of the high degree of absorption of

the phospholipids by the fat molecules there is additionally provided stability. Phospholipids are distributed throughout cell membranes, and are emerging as an area of active research in Dairy products. Because the molecule is made up of two distinct regions, one hydrophobic and the other hydrophilic, they react in water to spontaneously form a bilayer. As well as being biologically significant, this property holds great many areas of nutrition and medicine. Since milk is a good source of these phospholipids it is understandable that there is current research to be able to obtain and preserve them in dairy foods such as milk powder and other products.

**Key Words:** Phospholipids, Milk Powder

## Bio Ethics - Livestock and Poultry: The Ethics of Food

**207 The ethics of food.** J. M. Regenstein\*, *Cornell University, Ithaca, NY.*

Believe Nothing That You Think! We all like to think of ourselves as ethical, and think carefully about our ethical standards, yet we often do not agree with each other on what is right and wrong. Why? Because our ideas are formed not just through our scientific/rational training but also from inputs that are beyond our scientific/rational education. Our ethical beliefs reflect who we are. But, as a society, the only way to approach ethics with a hope to reach agreement/compromise is to address ethical issues using rational arguments and reasoning. Therefore, ethical judgments must be offered in the "Marketplace of Ideas" and be able to withstand critical evaluation by those who may disagree. Formally, this is required within the field of philosophy: "Philosophy, like morality itself, is the first and last an exercise in reason, the ideas that should come out on top are the ones that have the best reasons on their sides." (Rachels, *The Elements of Moral Philosophy*, 1999. p. xii). So the challenge in participating in the debate is to use rational arguments when discussing controversial ethical principles? (And admit when one's arguments are emotional?) But what are rational arguments? This can be difficult to determine although irrational ones are probably easier to identify. An important irrational one centers around the following point: If something specific is wrong (rationally unacceptable? unethical?) with a particular system, i.e., such as a number of the concerns consumers have with the food system, especially animal agriculture; what does that mean? That we should analyze the specific problem, look for rationale solutions, and work hard to apply those solutions to correct that problem and then continue to evaluate how effective the solution is and continue to seek better solutions. What the problem does not rationally imply is that the system identified should not exist (e.g., eliminate animal agriculture) and/or that because of these problems, another system should replace it (e.g., veganism). The replacement needs to justify itself on its own rationale evaluation and merit. In the meantime, we need to work hard to find solutions to these critical problems.

**Key Words:** Animal Agriculture, Ethics, Food

**208 The ethics of semantics: do we clarify or obfuscate reality to influence perceptions of food animal production?** C. C. Croney\*<sup>1</sup> and R. D. Reynnells<sup>2</sup>, <sup>1</sup>*Oregon State University, Corvallis*, <sup>2</sup>*US Department of Agriculture, Cooperative State Research, Washington, DC.*

According to linguists, the discourse of animal production uses metaphors, pronouns, and definitions that consistently represent animals as objects, machines, and resources, instead of as distinct, unique individuals. Thus, it is argued, genuine concern for animal welfare is either obscured by financial concerns or circumvented entirely, which permits animals to be kept and treated in ways people would otherwise find objectionable. Substituting euphemisms like "crops," "units," and "harvest" for "herds," "animals," and "slaughter," which are more likely to evoke images of grape plucking than of killing animals for food, might indeed seem disingenuous, especially given the common industry refrain that the public needs to be better educated about food production. However, the implication that the animal industries deliberately employ such techniques is debatable. What is clear is that the semantic obfuscations rampant in the language of modern farm animal production reflect underlying ambivalence about full and frank public education about many standard industry practices. First, consumers are unlikely to want full disclosure of all aspects of animal production. Second, there is real risk that certain realities of animal production would be aversive to consumers, who might consequently refuse (as is their right) to purchase particular products, thus causing significant industry losses. Yet, the animal industries' reluctance to "come clean" in public education efforts raises another problem---that adopting innocuous terminology and withholding information deemed likely to be unpalatable to the public is morally questionable in itself. Moreover, this provides an avenue for opponents of animal agriculture to exploit. In truth, animal extremists are now in a position to reveal facts about livestock production that might not only disturb consumers, but also cause speculation about the industries' failure to be forthcoming. As a matter of professional ethics and viability, animal industry members should reconsider the discourse of farm animal production to ensure that what is conveyed is accurate and intended.

**Key Words:** Ethics, Semantics, Animal Production

**209 What would the world be like without animals for food, fiber, and labor? Are we morally obligated to do without them?** S. L. Davis\*, *Oregon State University, Corvallis.*

Numerous animal rights theorists have concluded that nonhuman animals have moral standing and non-interference rights. Therefore, they say that humans are morally obligated to stop using animals for food, fiber, labor and research. I disagree with that conclusion for at