Animal Product Labeling and Animal Welfare

The farmer and consumer benefits of animal product labeling and their association with animal welfare

Tag Words: animal welfare; farming; agriculture; organic food; natural food; livestock; meat; factory farming; food labels; Global Animal Partnership; USDA/Organic; Animals Welfare Foods, Certified Humane; American Humane Certified; American Grassfed; United Egg Producers Certified; Animal Welfare Approved; Compassion in World Farming; Eat Wild

Authors: Jacquelyn C. Teson, Amanda S. Rodriguez with Julie M. Fagan, Ph.D

Summary
The animal production market impacts the economy, provides food, affects consumer health, and contributes to environmental issues. As consumers begin to learn about the different methods of animal production, a growing market for organic and naturally produced animal products has arisen and organizations have been created to promote animal welfare. These organizations invent their own food labels which require producers to adhere to higher animal welfare standards, which consumers can use to better choose which products they want to purchase and support. As our service project, we created a comprehensive fact sheet representing seven more common food labels. We selected one label, Global Animal Partnership, to promote. We are compiling a list of local farmers to contact in order to spread awareness about the labels in the farming community. In addition, we sent messages to newspapers to help increase consumer and farmer awareness. We hope that more farmers will use the GAP scale to label their foods and consumers will begin to recognize and purchase more products which use the GAP scale. This will ultimately improve animal welfare, human health, and reduce environmental issues caused by intensive farming practices. (JT)

Video Link
http://youtu.be/nsHM9IXZsYc

Current Regulations on Animal Welfare in the United States
Production animal welfare is regulated, but not strictly. Some animal welfare laws only address certain animals, which do not include animals used for production. In addition, many regulations will use the term “humane” but not provide an easily measureable definition for it. For instance, the New Jersey Department of Agriculture defines the term “humane” as “marked by compassion, sympathy, and consideration for the welfare of animals”
This is an ambiguous description that could be left open to interpretation. Laws regarding basic animal production are somewhat nonspecific. The following section reviews several main laws and regulations relating to animal welfare and how they apply the animal production industry.

1. Animal Welfare Act

The Animal Welfare Act (AWA) is a set of regulations enforced by the USDA in order to ensure the proper treatment of certain animals. The AWA addresses sale, care, treatment, housing, handling, and nutrition, among other aspects. However, the AWA does not apply to animals used for food, clothing, or other agricultural purposes. It mainly addresses required conditions for cats and dogs and therefore will not be discussed further.

2. Humane Slaughter Act

The Humane Slaughter Act mainly addresses methods of slaughter for animals used for food. The two methods accepted by the Humane Slaughter Act in regards to method of slaughtering are:

“(a) in the case of cattle, calves, horses, mules, sheep, swine, and other livestock, all animals are rendered insensible to pain by a single blow or gunshot or an electrical, chemical or other means that is rapid and effective, before being shackled, hoisted, thrown, cast, or cut; or

(b) by slaughtering in accordance with the ritual requirements of the Jewish faith or any other religious faith that prescribes a method of slaughter whereby the animal suffers loss of consciousness by anemia of the brain caused by the simultaneous and instantaneous severance of the carotid arteries with a sharp instrument and handling in connection with such slaughtering.”

The Humane Slaughter Act addresses very little on the treatment of the animal prior to slaughter, except that a report must be filed for animals that cannot sufficiently walk independently and these animals must be treated humanely (http://www.animallaw.info/statutes/stusfd7usca1901.htm§ 1907).

2. Food Safety and Inspection Service

Similar to the Humane Slaughter Act, regulations by the Food Safety and Inspection Service (FSIS) sect of the USDA only address animal welfare standards on the slaughter of production animals. Rather, the FSIS focuses on standards for the carcasses and meat produced in order to ensure human health. The FSIS is more directed towards human welfare as opposed to animal welfare.

3. The EPA and CAFOs

“AFO” stands for “animal feeding operation.” It is assumed that the animals in an AFO are confined and used for production and that feed is brought to the animals rather
than the animals grazing or foraging. According to the Environmental Protection Agency, or EPA (2007), approximately 450,000 AFOs exist in the United States. CAFOs are concentrated animal feeding operations. Fewer of these exist and they are regulated by the EPA.

The EPA emphasizes the impact of CAFOs on water quality. CAFOs generate large amounts of manure waste, which often leaks into water. Through the National Pollutant Discharge Elimination System, a permit program authorized by the Clean Water Act, the EPA attempts to manage pollution by regulating significant sources of water pollution. One such source is CAFOs. The EPA classifies three different levels of CAFOs: small, medium, and large. Each class has a certain number of animals allowed for it to be considered at that level. For instance, a large CAFO has 1,000 or more cattle, while a small CAFO has 300 or less. A large CAFO has 125,000 or more chickens, versus a small CAFO which has less than 37,500. Even small CAFOs have very high animal stocking densities, however.

The EPA is currently proposing a rule that would necessitate CAFOs to submit information about their operational methods to the EPA. This would help the EPA monitor the CAFOs in order to maintain healthy water conditions for humans as well as improve animal welfare.

4. New Jersey Department of Agriculture Guidelines

Guidelines for the production and treatment of animals used for production are often left to the state to decide. New Jersey Department of Agriculture humane standards are fairly lax. Diet specifications merely require that all nutritional needs are met—specific ingredient requirements or prohibitions are not mentioned. Space requirements are also often not specified, and all that is required is enough space for the animal to turn around or lie down, as in the case of cows. This does not necessarily suggest that the animal has adequate space to exercise properly. In the case of cage-production of chickens, the NJ Department of Agriculture requires that the cage system be such that soiling of birds on lower levels by the fecal matter of birds on upper levels be minimized, but it does not require that this be entirely prevented or specify the definition of “minimized” (http://www.state.nj.us/agriculture/divisions/ah/pdf/HumaneStandards2010.pdf). While definite guidelines for production animal welfare exist, it is clear that these guidelines are often not specific and therefore become an umbrella which can apply both to farms with relatively poor welfare practices and farms with ideal animal welfare practices. Some of the negative aspects of production schemes with lower animal welfare standards are discussed in the following sections.

What are CAFOs and why do they exist?

The United States is currently in an economic slump. Naturally, this causes many people to analyze more closely the value of their purchases in relation to the cost. Shoppers search for the product with the most substance for the least price, and therefore producers attempt to produce very inexpensive products. The most cost-effective method of producing meat and other animal products is through the use of CAFOs. While
CAFOs are efficient means of production, concern for animal welfare is necessarily smaller in these operations.

The use of CAFOs is an intensive method of producing the greatest quantity of animals for consumption for a minimal price. According to Turner (1999), the identifying characteristic of CAFOs are that “animals are kept at an unnaturally high stocking density and very often indoors away from any natural source of food.” Factory farms account for 67% of poultry meat production, 50% of egg production, and 42% of pork production (Halweil, 2008). CAFOs exist in all lines of animal production, including the chicken, turkey, beef, veal, dairy, buffalo, goat, sheep, and pork markets. Cattle, pigs, goats, bison, and dairy cows are kept in small feedlots and sometimes in stalls or tethered, and chickens and turkeys are kept in rows of battery cages, often with minimal space. Calves used for veal are kept in crates so small that they can barely move.

While an efficient means of production, CAFO conditions create many issues including improper diet, environmental issues, and health issues for both the animals and the people who consume them or the products (eggs, milk, etc) produced by them. Rather than being fed a diet balanced for optimal health and performance, the animals are fed a diet for rapid growth or greatest production of eggs or milk, depending on the animal (Turner, 1999). These diets are often not healthy for the animals, even though they yield the most value for the intensive farmer. CAFO methods cause stress for the animals, which can leave them more susceptible to disease. The close packing of the animals allows for rapid spread of illness. The farmer must combat these issues using antibiotics, which leads to the unnecessary use of hormones, antibiotics, and other drugs. Overuse of medications encourages an increase in disease-resistant bacteria, which can infect people who consume the animals or animal products later on (Robinson, 2010). The enormous density of animals packed into CAFOs causes extremely large quantities of waste buildup in a small space. According to Robinson (2010), farmers cut costs by dumping manure as close to the feedlot as possible. This causes the surrounding soil to be overloaded with nutrients, leading to ground and water pollution. Intensive farming also contributes to greenhouse gases. These issues will be discussed in greater detail in later sections.

Although it has many negative aspects in regards to animal welfare, it must also be noted that the situation of intensive farming or is a multifaceted issue with various economic influences. One could argue that the methods used in this type of production are necessary to produce enough food for the current number of people in the United States at an appropriate cost. Lower classes may not be able to afford meat and dairy products produced by other means. The growth of intensive animal farming practices has also contributed positively to the economy because of it the inexpensive production methods. However, as will be discussed later, a growing market for organic and natural products has blossomed out of the concern for food safety and animal welfare. This suggests that a significant portion of consumers are interested in purchasing products with increased welfare standards, even though the price is higher.

1. Negative Effects of Intensive Farming on Animals

1.1 Diet

Depending on the species, animals in intensive farming practices are fed a diet designed to maximize their growth or production. Protein is required for animals to
grow, maintain body tissues, build muscle, and produce milk and eggs (Turner, 1999). Normally, ruminants and other grazers would acquire protein in smaller doses from plants. However, mass producers of animals must attempt to find the least costly sources of protein in order to provide a high-protein diet to maximize these outputs. These often include waste products such as blood meal, feather meal and fishmeal (Turner, 1999). According to Robinson (2010), the main ingredients in these feeds are often genetically modified grain and soy that are kept at artificially low prices by government subsidies. In order to reduce costs even more, feed may contain “by-product feedstuffs” such as municipal garbage, stale pastry, chicken feathers, and candy and until 1997 cattle were being fed meat from other cattle, which is believed to be the cause of mad cow disease (Robinson, 2010). Some animals are raised on grass before arriving at feedlots to be fattened for slaughter. Ruminants are animals with digestive systems specialized for digesting fibrous plants. Cattle, dairy cows, goats, sheep, and bison are examples of ruminants. Switching a ruminant who is accustomed to a high fiber diet onto a diet of low-fiber grain can cause digestive upset. This leads to many disorders. One common but painful disorder is sub acute acidosis, which causes cows to kick at their bellies, go off their feed, and eat dirt (Robinson, 2010).

Rapid growth can cause physical issues in animals as well. For example, broiler chickens have been shown to become too heavy for their legs and subsequently become lame and develop skeletal or gait abnormalities as well as diseased joints. As a result, normal behavior patterns such as feeding, drinking, walking, scratching, pecking and dust bathing are reduced (D’Silva, 2006).

Calves raised for veal are fed a low iron diet so that the flesh produced will be white color that gourmet restaurants prefer. This usually means that the calves are constantly on the verge of clinical anemia (D’Silva, 2006). The calves will try to gain proper nutrients by licking the bars of the crate or even eating their own hair. This can lead to hairballs in the stomach, causing digestive issues of varying severity (Singer, 2006).

1.2 Stress and Animal Health Issues

Normal animal behavior typically cannot be expressed in the high animal density environment of CAFOs. Chickens and turkeys are often tightly packed into cages, sheds, or pens, and therefore cannot practice behaviors such as rooting, grazing, and roosting (Robinson, 2010). According to D’Silva (2006), up to 20,000 day-old broiler chicks are placed simultaneously into large windowless sheds. While this amount of room is acceptable at first, by the time the chicks have grown to full size there is not enough room for them to comfortably move around. Sometimes there is not enough room for all of the birds to lay down at once. The birds often struggle to get to food and water sites, which is one of the causes of high casualty rates in broiler chickens (D’Silva, 2006). Laying hens are kept in wire cages to minimize waste cleanup. There are usually multiple hens to a cage, leaving minimal room for each to move around. According to Singer (2006), 98% of commercial layer hens in the U.S. are caged, each hen receiving about 50 square inches of floor space. The space in which animals at CAFOs are kept often does not provide adequate ventilation from manure and feces, and the animals often walk and sleep in their own waste (Robinson, 2010). Due to the buildup of ammonia, burns to the hocks and blisters on the feet are common (D’Silva, 2006). Also, growth abnormalities
caused by the high protein diets can inhibit normal behavior patterns, as in the case of broiler chickens as mentioned previously (D’Silva, 2006). The lack of ability to exercise as well as the high demand for eggs causes calcium deficiencies in laying hens, leading to bone fragility. This condition is known as “cage layer osteoporosis.” According to D’Silva, approximately 35% of all mortalities among caged hens in one commercial-scale study were attributable to cage layer osteoporosis.

In some animals, deprivation of normal behavior expression causes the animal to bite or otherwise injure other animals. In the case of pigs, the inability to root causes them to bite each others’ tails. This can lead to severe infections which can travel into the spine or lungs. In order to avoid this, tails are often docked at birth and their incisors are cut or filed down (D’Silva, 2006). If given the proper stimulation were provided, this mutilation would be completely unnecessary. When pigs are given access to more bedding, toys, or outside space these behaviors disappear. A similar issue is seen in chickens. Normally, birds constantly peck at the ground for food. Crowding in CAFOs due to high animal density prevents this behavior, and the birds turn to pecking each other. Farmers solve this issue by cutting the front end of their beak off, even though this part of the beak is very sensitive. This often interferes with the birds’ ability to eat, causing some birds to starve to death (Ross, 2010).

Sows are kept in stalls and tethers, preventing normal movement. Sows are typically kept on concrete with no bedding, which increases their likelihood of foot injuries and lameness. The lack of exercise leads to weak bones and muscles, and being unable to move freely causes greater frequency of urinary infections and may contribute to heart issues (Singer, 2006). Sows have been shown to exhibit behaviors called stereotypies in order to cope with their environment. These behaviors include bar-biting, shaking the head, chewing the air, and attempting to root at the concrete floor. Before giving birth, sows typically like to engage in nesting, but without bedding they constantly nose at the ground. Eventually the sow can quiet down and become clinically depressed. Sows are often kept continuously hungry. In order to maximize growth, they are fed restricted rations of concentrated food which provides for their nutrient requirements but is not filling like the roughage they would normally consume throughout the day. This adds to the stress of the sow and contributes to the stereotypies she exhibits (Singer, 2006). The UK, Sweden, and several other countries have banned sow stalls, but the United States has not.

Calves raised for veal are particularly stressed when raised in a CAFO-type setting. The calves are separated from their mothers soon after birth and are confined in individual crates until about 5 months of age. These crates are narrow, wooden sided boxes in which the calves may be chained or yoked so as to minimize movement. The calves can rarely turn around in these crates and are usually unable to make contact with any other animal besides the calf directly next to them. This frustrates both their suckling instincts as well as their social instincts, as cows are herd animals (D’Silva 2006). As the calves have never had the opportunity to exercise, they cannot walk properly when being moved to be transported for slaughter. They have no muscle and therefore stagger towards the truck, unsure how to properly use their legs (D’Silva, 2006).

Production animals have been genetically selected for growth and size. While this is ideal for the business side of production, it is not healthy or natural for the animals. This type of selection results in chickens with painful legs and cows with overlarge,
awkward bodies that cause high rates of lameness. The shape of the dairy cow has been genetically adjusted so that she has increasingly large udders to produce more milk. This leads to a greater prevalence of mastitis, a painful inflammation of the udder. Larger udders also cause the cows to spread their legs unnaturally wide, inducing walking issues and distortion of the pelvis and spine (Kensky, 2010). Dairy cows today produce ten to twenty times more milk than necessary to suckle a calf. Lactation places heavy strain on the cow. As a result of the extreme lactation that has been produced, many dairy cows have a much shorter life span than in previous years (Kensky, 2010). Another example of improper selection can be seen in broiler chickens, as their genetically-selected fast growth rate increases strain on the cardiovascular system (D’Silva, 2006). D’Silva cites an even more extreme example of genetic modification in the Belgian Blue breed of cattle. Breeders have selected for cattle with a “double-muscling” mutation to yield extremely large hindquarters. However, most births of double-muscled calves must be performed by cesarean section because the pelvic region in the female cannot expand enough to permit a normal birth. The life span of many CAFO animals is shorter due to genetic factors. However, as long as they reach the desired weight before going to slaughter, farmers are not concerned with their level of comfort or lifespan.

Intensive farming practices cause many minor health issues and injuries in animals that would normally be treated by a veterinarian on a smaller scale operation. Because of the sheer number of animals on an intensive farming site, many of these animals remain untreated (Kensky, 2010). These animals do not receive the same individual treatment as the animals on local farms and minor injuries or health issues can become major problems if left untreated too long.

2 Effects on the environment

The advent of factory farming not only has negative health effects, but it also has had unintentional effects on the environment. Factory farming expends fossil fuels, water, and topsoil at unsustainable rates. At the same time, factory farming contributes an overwhelming amount to the degradation of the environment such as water and air pollution, soil depletion, reduction in biodiversity, and fish die-offs. Scientific research shows factory farming and livestock production also contributes to global warming and climate change. The goal of factory farming is to increase yields and decrease costs of production. However, the methods used are unsustainable because the consumption of nonrenewable resources are occurring faster than the rate of restoring them.

2.1 Land

Animals historically are a part of the natural process to keep soil proliferated. Their manure recycles nutrients and builds organic matter in the soil. However, factory farm animals are generating animal wastes in quantities the exceed ideal ratios of waste to soil. In 1997, factory farming produced 130 times the nation’s volume of human waste. Thus, the quantity of animal wastes is overwhelming and is overloading local croplands called lagoons that are now prone to spills, endangering environmental and human health.

Animal feed, also known as compound feed, is largely composed of grain including soy bean, corn, sorghum, oats and barley. During feed production, synthetic chemical pesticides and fertilizers pollute the soil, water and air in vast proportions
because of runoffs. As a result, human public health is put at risk. In addition, a sufficient amount of the grain fed to factory farmed animals is grown in parts of the world and deprives these parts of their own land. The mass production of grain for factory farming feed in combination with the chemical pollution to protect the feed stresses the top-soil of these lands, which results in erosion and arid land. The United Nations (UN) refers to the extreme of this situation as desertification, which indicates once fertile land that has been eroded and depleted of its nutrients. Currently, according to the Worldwatch Institute, approximately 15% of all land surfaces are experiencing some form of desertification, and the UN approximates the annual global cost for desertification is $42.3 billion.

2.2 Water

Agriculture accounts for more water use than industry and municipal use combined, and is responsible for two-thirds water use worldwide. The United States Environmental Protection Agency (USEPA) blames current agricultural methods for 70% of run-off pollution of rivers and streams. Runoff has polluted 173,000 miles of waterways in the U.S. alone. Irrigation systems have brought short-term life to low-rainfall regions for factory farming especially the livestock sector. However, much of the irrigated water in parts of the U.S. such as Colorado, Texas, Nebraska and Kansas, waterlogging and salinization is a problem, but are still used for farming grain used for livestock feed.

2.3 Energy, global warming, and climate change

Processing, packing, and transporting meat is a fuel intensive project on its own in addition to the cultivation of animal feed grain. In addition, it has been shown that feeding grain to livestock to produce meat results in a loss of energy rather than if humans consumed the grain directly. According to the Intergovernmental Panel on Climate Change, agriculture is directly responsible for 20% of greenhouse gases emission by humans, and changes in land use for the agricultural purposes accounts for 14% greenhouse gas emissions by humans. Nitrous oxide emission from manure and chemical fertilizer used in feed production in conjunction with the methane emission from manure and digestion makes up the majority for the 20%. Livestock production contributes 37% of total methane, 65% of total nitrous oxide, and 9% of total carbon dioxide emissions. In addition to the greenhouse gas emissions, livestock production contributes 65% of the total ammonia emissions that contributes to the pollution to air, soil and water, acid raid, and damage to the ozone layer.

The UN Food and Agriculture Organization (FAO) estimates the global consumption of animal products would double from 2001 to 2050 from 60 billion animals consumed per year to 120 animals per year. The FAO feels that factory farming and animal production in general should be a priority for environmental policy because of the increase in demand for animal products and the environmental and carbon costs. Some environmental advocates suggest decreasing animal product consumption to reduce the effects, however, there may be an alternative—the natural foods market.

3. Effects of Factory Farming on Human Health

3.1 Spread of Disease
Not surprisingly, many diseases originate at sites of mass animal production. The U.S. Centers for Disease Control and Prevention have estimated that food-borne diseases cause approximately 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths in the United States each year. More than 75% of the approximately 1,800 deaths attributed to known pathogens are blamed on Salmonella, Listeria, and Toxoplasma, which are all transmitted to humans primarily through meat (Horrigan et al., 2003). Diseases such as avian flu, pig fever, and Nipah virus have also been known to spread rapidly among animals living in dense groups because of the overcrowded and unsanitary conditions. Mad cow disease is believed to have been caused by feeding cattle ground-up portions of other ruminants (Halweil, 2008). According to Ross (2010), the primary source of Salmonella infections to humans are eggs. Recent scientific research indicates that confining laying hens into battery cages greatly increases the risk of Salmonella. In one study initiated by the European Union, it was found that the incidence of Salmonella Enteritidis contamination was 43% less in cage-free egg production, 95% less in organic egg production, and 98% less in free-range systems than in battery-caged egg production (Ross, 2010). For Salmonella Typhimurium, the most common type of Salmonella poisoning in the United States, there was 77% less Salmonella infection among cage-free hens and 93% less Salmonella contamination in organic and free-range hens than in battery-caged production (Ross, 2010). Salmonella does not always affect the chicken, and the crowded conditions combined with the high speed processing of the birds for slaughter makes detecting contamination difficult (Horrigan et al., 2003). While the European Union has banned the use of battery cages in order to reduce Salmonella infections, the United States has not, which indicates a preference for profit over public health safety (Ross, 2010). In cows fed corn before slaughter, the digestion of corn acidifies the cow’s digestive tract, killing many beneficial bacteria. This can lead to the disabling of the killing of E. coli within the cow, and it can be passed on to the consumer through consumption of meat or contaminated water (Kensky, 2010).

In the past, there has been much speculation regarding the potential human health effects resulting from the use of bovine growth hormone (rbGH). It should be noted that, while there is still research being conducted on potential long-term effects of bovine GH, in 1990 the FDA concluded that the use of rbGH presents no increased health risk to humans (Guyer and Juskevich, 1990). The FDA concluded this after it was determined that rbGH is not biologically active in humans or rats and that the amount of insulin-like growth factor present in the milk of dairy cows given rbGH is within the normal range of that found in human breast milk (Guyer and Juskevich, 1990). While the use of hormones may cause growth issues for the animals, food produced by the animals given the hormones is safe for human consumption and does not appear to pose any significant health risk.

3.2 Intensive Animal Farming and Antibiotics

The use of antibiotics in animal production is thought to be one of the causes of increasing antibiotic resistance in humans (Horrigan et al., 2003). The use of antibiotics is more prevalent in CAFOs as opposed to other animal production operations, due to the disease-friendly conditions. According to Horrigan et al., “70% of U.S. produced antibiotics are fed to animals to promote growth and excessive use of such drugs in animals can enhance the development of drug-resistant strains of disease, which can then
be transmitted to humans through the food supply.” Genes that would otherwise neutralize antibiotics begin to protect disease-causing germs (Goldman, 2004). Another concern is that bacteria can rapidly transfer antibiotic resistance to other bacterial species. This resistance could spread into diseases that are not related to food, increasing the threat of disease (Goldman, 2004). Antibiotics are one of the most important developments in disease prevention, and to their misuse in the food industry could create a global problem if antibiotic-resistant bacteria become too strong or deadly.

3.3 Food Quality

Due to the necessary methods for quick growth, meat from CAFOs is not as healthy as meat from grass-fed animals. Grain-fed animals are higher in overall fat than grass-fed animals. Diets high in fat contribute to a host of health issues including high cholesterol, cardiovascular disease, obesity, and diabetes (Kensky, 2010). Meat from grass-fed animals has significantly less calories than meat from grain-fed animals. Some fats are healthy, however. According to Robinson, there is strong evidence that omega-6 fatty acids can contribute to cancer cell growth and invasion. When we consume meat from or milk produced by animals fattened on grains high in omega-6s, we increase our own consumption of omega-6s. Grass-fed animal meat and milk does not contain such high levels of omega-6 fatty acids as that produced from animals from CAFOs. In addition, grain-fed animals have a much lower omega-3 fatty acid supply than grass fed animals. Omega-3 fatty acids help lower blood pressure, prevent irregular heartbeat, and help normal brain function. Omega-3s are formed in the chloroplasts of green leaves and algae and 60% of the fatty acids in grass are omega-3s. When cattle are taken off omega-3 rich grass and shipped to a feedlot to be fattened on grain, they begin losing their stores of this beneficial fat. The same effect occurs in chickens. When we consume meat produced from grain-fed animals, we consume a disproportionate amount of omega-6s and omega-3s (Robinson, 2008). We therefore increase our consumption of bad fat and decrease our consumption of good fat. Grain-fed meat is also lower in conjugated linoleic acid than grass-fed meat. Conjugated linoleic acids help to reduce cancer as well. While purchasing less expensive meat produced by factory farms may be cost-effective in the short-term, long-term health effects may turn out to cost consumers more than purchasing a higher quality, grass-fed product (Kensky, 2010). Intensive farming practices simply cannot afford to maintain their level of profit and feed a forage-based diet, which is a negative aspect of the economic environment created by intensive farming.

4 Growing natural foods market

Since discovering the health benefits of natural and organic foods, consumer interest and demand is vigorously encouraging a natural and organic food market, and the market is growing rapidly (Turner, 1999). Natural and organic meat is marketed through food service, retail, and directly to the consumer (Hardesty). In the food service channel, there are several restaurants that differentiate and market themselves as offering only natural meat. Chipotle Mexican Grill, having over 500 chain restaurants nationally, is the leading US restaurant in natural beef and poultry (Hardesty). Even universities including Rutgers University in New Brunswick, NJ now offers only cage-free eggs.
In 2006, organic and natural beef made up 1.4% of all fresh beef pounds in retail supermarkets, which is up from 1.1% in 2005. In 2006, retail sales for natural and organic beef comprised $72 million for 14 million pounds of natural and organic beef sold compared to the $3.6 billion and 1 billion total pounds of beef sold. Poultry is the most natural and organic meat product purchased by 73% of shoppers compared for 51% beef purchase rate (Hardesty). The Natural Foods Merchandiser (NFM) estimates the total sales of organic and natural foods in the U.S. from natural food stores, conventional grocery stores, or direct-to-consumer markets rose steadily from $1 billion in 1990 to $3.3 billion in 1996. The Organic Trade Association estimates sales of organic food and beverages in 2010 at $26.7 billion with mass market retailers selling 54% of organic food. It is estimated that the natural and organic food market will continue to grow 20 percent or more annually.

Consumers of natural and organic meats tend to be older between 25 and 39 years old. Research shows 21% of consumers report having purchased natural and organic meat during the past 3 months and 1/5 stated they only eat natural and organic meats. A research study by the National Cattleman’s Beef Association determined consumer motivations behind purchasing natural and organic meats. 44% of consumers purchased natural and organic meats because of the better health and treatment of the animals, 43% said it was because of the nutritional value, 42% said because of taste, 41.9% said because of positive long-term health, and 41.9% also said because of freshness. A survey conducted by Whole Foods Market in April 2006 determined the primary consumer motivation for purchasing natural and organic meats is the search for individual benefits rather than environmental or social. The Whole Foods’ survey also determined 61% of consumers think it is important to read labels to determine which natural and organic meat products guarantee products free of added growth hormone, antibiotics, and raised humanely (Hardesty).

Much research and debate revolve around organic and natural food markets’ yields, overhead, income, profitability, and other economics. Some argue that price premiums associated with organic natural food markets are what make organic and natural farming systems comparable or even more profitable. Others argue that, even without price premiums, organic and natural farming systems are more profitable because of high yields and lower input costs. Several studies also confirm organic and natural farming systems are also better tasting, more environmentally sustainable, and energy efficient. Regardless of less definitive answers to the economics of organic and natural farming, the numbers show consumers’ willingness to pay for better quality meat. With better knowledge of achieving organic and natural animal product labeling certifications and the growing market as an incentive, agriculturalists will want to specialize in natural and organic production. There is a growing demand, and despite the hurdles, there are many opportunities as well. Animal product labeling is still in development, but consumer understanding of labeling will increase demand for better quality products that will deter CAFOs.

Service Project: 2011 Animal Welfare Labeling Fact Sheet
1. What needs to be known?
   Over the years, environmentalists and animal welfare activists have been effective in making the world and agricultural farmers aware of what CAFOs and bad agricultural
practices do to the health of the animals, human health, and the environment. It is important for consumers to understand what the underlying meaning is of these new animal product labels. To increase natural animal product consumption for the sake of animal welfare and human health as well as the natural foods market, consumers need to be knowledgeable enough to understand what the higher price tag on animal products really means. In addition, farmers need a better understanding of the incentives of changing their agricultural practices to ones that are more humane as it relates to the growing natural and organic food market. The farmers who currently use humane practices need a better link to certifications and labels they may already unknowingly meet the standards for. Consumers and farmers may benefit though better knowledge of animal product welfare labels.

2. Current animal welfare initiatives and labels

According to research, organic meat and poultry labeling have lagged behind labeling in crops because meat could not be labeled as natural or organic until February 1999 with a provisional label by the USDA. Recognition through labeling is an important way to deliver information to the public of a healthier food market as it relates to current CAFOs practices. There are several organizations making strides to not only increase animal welfare and inform the public of an alternative lifestyle, but to establish standards producers can follow to achieve certification for being animal, human health, and environmentally conscious.

2.1 Eat Wild

Eat Wild is an online source of information for both farmers and consumers to raise and consume grass-fed livestock and animal products. The website is owned and maintained by Jo Robinson who is an investigative journalist and New York Times bestseller recipient who has been studying the relationship between feedlot and grass-fed agriculture for 13 years. The site does not offer a certification of its own, but is an example of the simple act of disseminating information to consumers, and by gathering a plethora of information for farmers to encourage making informed decisions on their product or labeling affiliation of choice for their best interest.

The site contains traditional information one would expect to find on a site promoting the consumption of natural meat and animal products, including information on health effects for animals and humans, food safety concerns, information on what it means to be grass-fed, and the environmental benefits. What makes this site unique and noteworthy is its ease of connecting the consumer to the farmer. The site contains a state-by-state directory of farmers who sell grass-fed animal and animal products directly to the consumer or retail store to find a variety of different certified labels. It also has a separate list of farms that are capable of delivering the goods should consumers be less inclined to travel to the farms. The site also has a bookstore and kitchen tools including cookbooks, books on food and food politics, and books on farming (eatwild.com).

2.2 Compassion in World Farming

It is noteworthy to identify Compassion in World Farming. CIWF was founded in 1967 by Peter Roberts, a British dairy farmer who was appalled by the development of factory farming. Compassion in World Farming is the leading farm animal welfare
charity. American animal welfare initiatives including Certified Humane® and American Humane Certified have said to have looked at European initiatives upon shaping their own, although neither explicitly suggests Compassion in World Farming served as their framework. Compassion in World Farming, although a UK charitable organization, is far reaching and has branches in other countries such as Ireland, Holland, and France, and work to becoming an international organization by 2014.

CAFOs produce large scale pollution to soil and water. According to research done by Harvard Medical School and the Netherlands Environmental Assessment Agency, reducing meat for our diets would reverse the effects of global greenhouse gas emissions by 20%. CIWF and other professionals believe that freeing agricultural land will result in the planting of trees and other vegetation that can absorb carbon dioxide in the atmosphere. In addition, some newly freed land may be used to harvest crops for biofuels, reducing dependence on fossil fuels. CIWF believes that animal feed constitutes 60% of the world's maize and barley and 90% of the world's soya while hundreds of millions of people go hungry. Factory farming results in poverty and rural unemployment and puts small farmers out of business.

CIWF peacefully campaigns for ways to end cruel farming practices such as banning battery cage systems, cloning, and long distance live transport. CIWF claims cheap meat obscures the real opportunity costs to animals, people, and the environment. CIWF believes the over consumption of meat fuels the obesity crisis and increases the risk of heart disease and cancers. CIWF also advocates that a decrease in animal product consumption will decrease environmental effects (ciwf.org).

2.3 Global Animal Partnership

Global Animal Partnership was founded in 2008 and serves as a non-profit charitable organization that links farmers, scientists, ranchers, retailers, and animal advocates. The goal of Global Animal Partnership is to improve the welfare of animals in agriculture with their 5-Step Welfare Rating Standard.

Global Animal Partnership has designed a 5-Step program, each with their own distinct label of achievement in certification, for which producers can aim to achieve. They may strive to achieve which ever level they choose, however, they are encouraged to move the welfare steps to achieve all 5. The achievement of the 5-step spans on 15 months in which farmers are audited and their animals raised are observed throughout their four seasons. The requirements are different for each species of animal (see fact sheet). Currently, a 5-step program exists for beef cattle, broiler chickens, pigs, and now turkeys. Global Animal Partnership is working on programs for egg-laying hens.

The rating system is based on the following framework depending on animal species: 1. No cages, no crates, no crowding 2. Enriched environment 3. Enhanced outdoor access 4. Pasture centered 5. Animal centered; no physical alterations 5+. Animal centered; entire life spent on the same farm. A two-year pilot program just concluded with Whole Food Market revealing 95% of Americans are concerned about how farm animals are cared for and 76% believe the well-being is more important than low priced meats (globalanimalpartnership.org).

2.4 Certified Humane ®
Certified Humane is a non-profit organization founded by Adele Douglass in 1998-1999 that has established standards of care that promote the natural behavior of animals and disallows the use of antibiotics and hormone treatment of any kind. Certified Humane claims to be the only labeling program that inspects its farms annually by an independent non-profit inspector, requires producers to meet all animal care standards in order to achieve certification, are supported by the leading humane societies locally, nationally, and regionally, and leads other programs in recognition because it’s founder has received the Purpose Prize and was elected an Ashoka Fellow.

The standards of care vary according to animal species which is available on their website. Certified Humane® has standards prohibiting hormone use, gives explicit requirements for animal euthanasia, windbreaking and shade, stocking density, outdoor access, and sleep for example (see attached fact sheet). Depending on the animals breed, it goes into far more detail. Certified Humane® leaves no stone unturned. Their website also lists fees associated with their certification such as an application fee, an annual inspection fee, and a certification fee available up front for farmers to be aware of.

Certified Humane® also allows consumers to search for retailers in their area selling which distributor/manufacturer’s products that are certified. It appears a variety of retail outlets in New Jersey sell Certified Humane® products because the manufacturer, Murray’s Chicken, is a certified producer. Rutgers University’s own frequented Foodtown is a retailer of Murray’s Chicken. However, it is interesting to note that aside from Murray’s Chicken and a select few egg producers, only one or two other meat manufacturers appear to be available within 100 miles of New Brunswick, New Jersey (certifiedhumane.org).

2.5 American Humane Certified

American Certified Humane traces its roots back to the establishment of the American Humane Association in 1877 and, following approximately 124 years later in 2001, American Certified Humane is said to be the first welfare certification program in the United States as well as the fastest growing. Like many other certifications and labeling, American Certified Humane has different standards for different animal species. However, the principal inherent in their certification program is based on the foundation of the Five Freedoms. The Five Freedoms include the freedom from hunger, freedom from discomfort, freedom from pain and suffering from disease, freedom to express their natural behavior, and freedom from fear and distress. American Certified Humane does not allow the use of growth hormones, has requirements on pasture and rage size, and require healthcare for the prevention of disease and parasites to name a few. American Certified Humane places great emphasis on working with their Scientific Advisory Board and Fellows to continuously improve their science-based standards so producers have the benefit of knowledge of the newest technological advances, practices, and methods to continue to provide humane care (see attached fact sheet).

American Certified Humane’s labeling program is backed by the American Humane Association. What makes American Certified Humane unique is that through affiliation with the American Humane Association, there is a unified awareness being made for all animals including animals in entertainment, companion animal with the “No Animals Were Harmed” program, and emergency rescue and relief of animals with the Red Star program (americanhumane.org).
2.6 USDA Organic

The USDA is a government organization whose purpose is to create regulations on certification, production, handling, and labeling of food products. The USDA also conducts audits around the world to ensure that other food agencies are properly certifying their organic products. Products wishing to be considered USDA Organic must adhere to strict standards. USDA Organic animal producers may not give their animals antibiotics or hormones, must provide their cattle, pigs and birds with outdoor access, windbreaks, and shade, and requires birds to be caught individually.

2.7 Animal Welfare Approved

Animal Welfare Approved was founded in 2006 by the Animal Welfare Institute. It has certified farmers in nearly every single state in the US. It is the only national nonprofit organization that audits, certifies, and supports farmers raising animals on pasture. Animal Welfare Approved is one of the more stringent labels, in that all animals, including chickens, are required to be pasture raised and birds have required darkness times. Additionally, Animal Welfare Approved does not have a membership fee, as many other labels do.

2.8 United Egg Producers Certified

United Egg Producers is a widespread organization that represents nearly 90% of the eggs sold in the United States. It addresses standards for both cage and cage-free production. United Egg Producers Certified is not as strict as many other welfare labels. The standards of the UEP were created by a panel of animal scientists from several universities and the American Veterinary Medical Association.

United Egg Producers Certified is a unique program in that producers need only to make a certain point quantity to be certified, whereas most other labels require farmers to adhere to all standards. UEP is also different from other labels in that it is not as stringent. United Egg Producers Certified is somewhat more ambiguous on the medications and circumstances for medication than the other labels, and does not require outdoor space for their birds. Cage-free production requires a floor system at minimum, and while it recommends that birds be carried individually, it is deemed acceptable to carry up to three birds in each hand at once. The prevalence of the UEP label is most likely due to its more relaxed standards and also that it addresses both cage and cage-free production.

2.9 American Grassfed

The American Grassfed label was formed in 2003. It receives funding from the USDA and has a widespread network of certified farmers in many states in the US. American Grassfed is different from most other animal welfare labels because it focuses mainly on ruminants, or grazing animals with a multi-part stomach that allows them to more fully digest forage. These include cows, buffalo, goats, and sheep. Also, American Grassfed focuses on the nutritional benefit of raising animals on pasture. According to American Grassfed, products from animals that are pasture raised are higher in Vitamin A, conjugated linoleic acid, and omega-3 fatty acids. This helps reduce cholesterol, diabetes, cancer, high blood pressure, and other obesity-related diseases.
Due to its emphasis on pasture raising its animals, American Grassfed ranks among the stricter labels. It is audited by Animal Welfare Approved auditors, which requires it to adhere to strict animal welfare standards.

3. What we did

(AR) We were concerned with the negative effects of factory farming and discovered the various organizations fighting for animal welfare. We then learned the certifications and labels used to identify agricultural farmers who use humane practices. Through the growth of the natural foods market and advent of product labeling, we discovered a way to aid the fight against factory farming and the fight for animal welfare though farmer and consumer knowledge of animal product labeling and certification.

We researched seven animal welfare labels and standards. We narrowed this down to the top 5 labels and decided to compare them in a fact sheet. The fact sheet describes various animal welfare issues and compares the standards of each of the top 5 welfare labels. We chose this approach, as it would be educational and beneficial to both consumers and farmers. We contacted New Jersey Agricultural Experiment Station (NJAES) and Rutgers Cooperative Extension (RCE), NJ Department of Agriculture, Eat Wild, and various newsletters to include our fact sheet on their websites or print in their newsletters.

Based on the fact sheet, we determined the best label to be Global Animal Partnership. Global Animal Partnership’s (GAP) 5-step program is unique in that it allows farmers to take as immediate an action as possible against factory farming and poor agricultural practices and all the associated negatives. Some labels require an “all or nothing” compliance with their standards to achieve certification, but GAP gives farmers a place to start more humane agricultural practices and a goal to strive to achieve all 5 steps. The “all or nothing” approach may actually be a deterrent because some farmers just do not have the tools or financial resources to comply with every standard right away. GAP’s 5-step program encourages all farmers and motivates them to work their way up. Global Animal Partnership uses a clear label to denote to the consumer to what degree the farmer has complied with the 5-step program as to not mislead consumers.

3. Our goal

(JT) As a result of this service project, we would ideally like to see the Global Animal Partnership labeling system gain more recognition and be used the most frequently of any animal welfare food label. This way, consumers do not need to sort through numerous labels to understand what they are purchasing. Additionally, we would like more farmers to become involved with labeling their foods. Hopefully, farmers will use our fact sheet to better understand what labels they can apply to their products, and will strive to reach higher levels of animal welfare. Ultimately, this would improve the health and welfare of people, the environment, and production animals. If consumers gravitate towards purchasing labeled food, we may even see a growth in the number of local farms and a decrease in the number of intensive farming operations. In addition, if consumers are purchasing foods labeled as more animal welfare-conscious, factory farms may attempt to increase their own animal management standards.
References


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Appendices

Letters to the Editor/Editorials

1. Health consciousness motivates animal welfare labeling
   (AR) Submitted to The Home News Tribune and The Daily Targum

   Non-communicable diseases are on the rise worldwide. Public health officials are working to educate populations on changing the modifiable behaviors that are negatively impacting their health. Some non-communicable diseases of concern are cardiovascular disease, diabetes, and cancer. One of recent special recognition is type I diabetes and cardiovascular disease related to poor diet and exercise. On another front motivating reform are environmentalists that are recognizing the environmental impacts of factory-farming and poor agricultural practices as it relates to health. Animal welfare activists are also paying close attention to factory-farming and poor agricultural practices as they impact animals. All areas of expertise together are encouraging a time where agricultural output is better categorized based on quality not quantity. What better way to denote quality then welfare labeling and certifications from a handful of organizations leading the way to promote natural food achieved through animal welfare. This growing health consciousness is motivating the growth of the organic/natural food market. Next time you visit your local grocery store, take notice to the growing natural/organic food section that is no longer exclusive to health food stores.

   As a public health senior at Rutgers University School of Environmental and Biological Sciences and Edward J. Bloustein’s School of Public Policy, my partner and I have researched throughout the fall 2011 semester the problem with factor-farming, its effects of animal and human health, and its effects on the environment. We have compiled a list of the most prominent animal welfare labeling to educate the public and farmers. Our goal is to educate farmers on alternative practices in a flourishing natural/organic market, and/or link farmers to certifications and networks based on standards they may already comply with. We hope to educate the public on the various labels and what it really means, for example, regarding antibiotic use, living quarter requirements, and slaughter requirements.

   Many of us have already made the switch to organic fruits and vegetables because of the pesticides and genetic modification we fear consuming. Now, consider making a similar investment in natural/organic animal products. Before you invest in the natural foods market, take the time to learn about the various labels, what their standards are, and what it means to you after learning the challenges we face as a result of factory-farming and poor agricultural practices.
My name is Jacquelyn Teson and I am currently a student at Rutgers University. I am an animal science major and am also interested in human nutrition. As such, I am interested in improving animal welfare in production animals for the benefit of the animals as well as the health of the people purchasing and consuming the food produced.

As I am sure you are aware, the natural/organic food markets are expanding due to human health and animal welfare concerns. As a result, many foods have labels such as USDA Organic, Animal Welfare Approved, etc. However, few comprehensive fact sheets exist to help consumers or farmers sort through the labels in order to understand their meaning. I am working with a partner to create a fact sheet to publish on the Rutgers Agricultural Extension (http://njaes.rutgers.edu/ag/) website targeted at both consumers and farmers. As of now, the new fact sheet is not finalized but the final version will provide a basic overview of each major food label including a picture, information on what is required for a farmer to use the label, and link to a website for more information. After reviewing all the labels, we plan to select one to encourage farmers and consumers to use or look for. This way, the label will become more well-known and more greatly utilized. This will make it more common and therefore more effective, and hopefully there will not be such a confusing array of food labels for consumers and farmers to sort through. Ideally, we would like to increase awareness of the labels so that consumers can make the best food purchases for their own health as well as the welfare of the animals used to create the product. In addition, we hope that farmers would be able to use the fact sheet in order to begin marking their foods with the labels or aspiring to make minor (or major) changes to their production practices to be able to use one of the labels on their products. Using the labels would show that their products are more welfare-conscious and healthful and therefore would make them more appealing to consumers. We feel that (newspaper) would be an excellent way to reach our target audience, and would therefore like to know if you would be interested in publishing an article about this new fact sheet. This would help us raise awareness in the farming community, as this is the area in which we hope to make the most impact. Thank you for your time.

Sincerely,

Jackie