International Meat Secretariat

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NEWSLETTER
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SUMMARY

POSITIVE 2014 OUTLOOK FOR THE MEAT INDUSTRY: WITH BETTER GLOBAL MEAT DEMAND AND LOWER FEED COSTS

The latest annual Gira Meat Club report concludes on a much **more favourable outlook for the global meat sector in 2014**. Stronger economic conditions will favour better meat demand growth, and costs will be down due to the lower feed costs. That should be good for producer profitability, but in many countries it will be a tough year for processors.

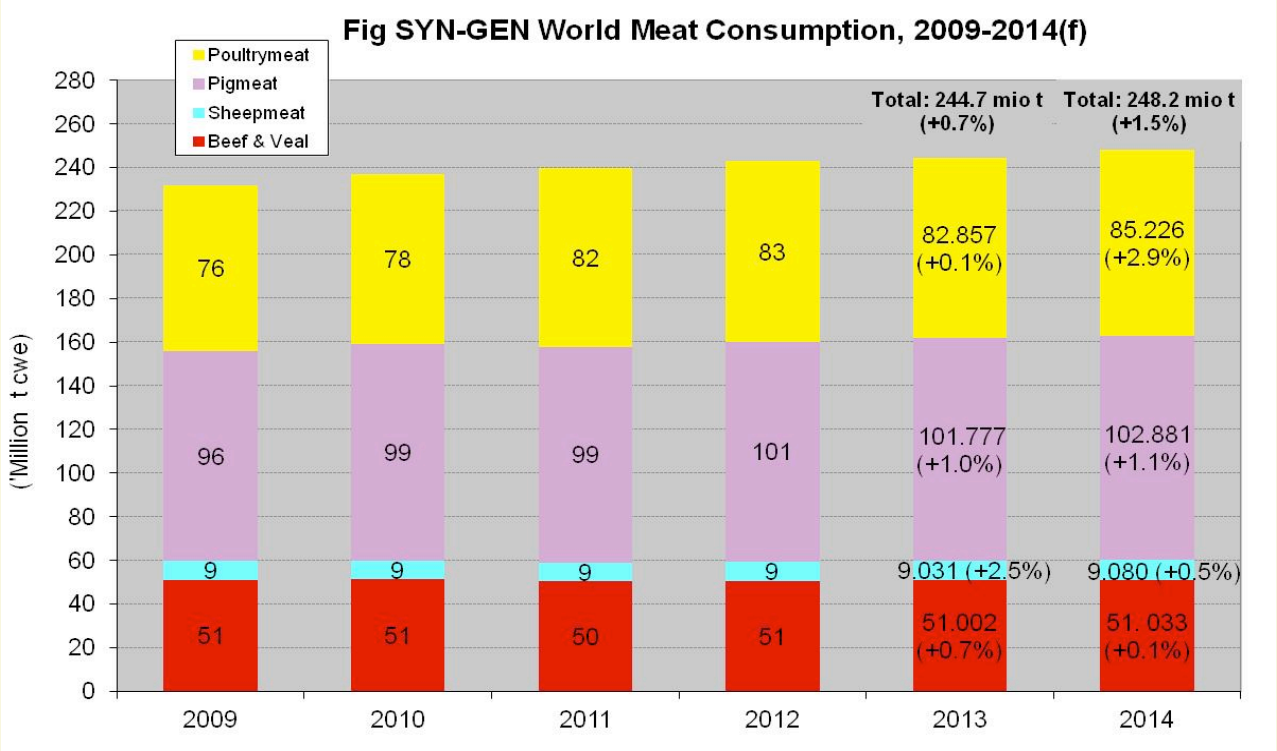
Global GDP growth is expected to increase by +3.6% and with less risk of 'fracture' than the last two years, led by the emerging markets (BRIC+) … and with growing interest in the so called MINT countries (Mexico, Indonesia, Nigeria, and Turkey). Even the EU economy should emerge from recession, although the recovery is not universal and unemployment levels remain a major concern.

Global meat **consumption growth is forecast at a modest +1.5%** which is still at lower rate than historical average. This reflects the continued cautiousness of the meat sector: with serious consumer and retailer price resistance in the developed economies, trade disruptions and long run cost inflation all impeding growth.

After a poor 2013 year – impacted by high feed costs and avian flu, the **chicken sector will show the highest growth**. Indications are that integrators will fall into the normal trap of over-aggressive expansion which will undermine the chicken price, at a time when the red meat supply is still constrained.

On average, **global producer prices are expected to be stable** or to show a small price decrease … but from high current levels, which have only slightly softened from the very strong rise in 2011. That price spike was driven by Chinese and S.Korean supply problems exacerbated by the disease challenges of PRRS and FMD respectively, overlaid on a world meat supply chain which is 'tight' and generally conservative and cautious. This supply caution reflects many different factors – but uppermost would be the rise in production costs (especially feed) since 2007.

Across the species, there were mixed price trends for 2013. The pork price index continued to fall as it is heavily influenced by China where prices softened as supplies recovered. Elsewhere in the world: pig prices firmed as producers cut back production due

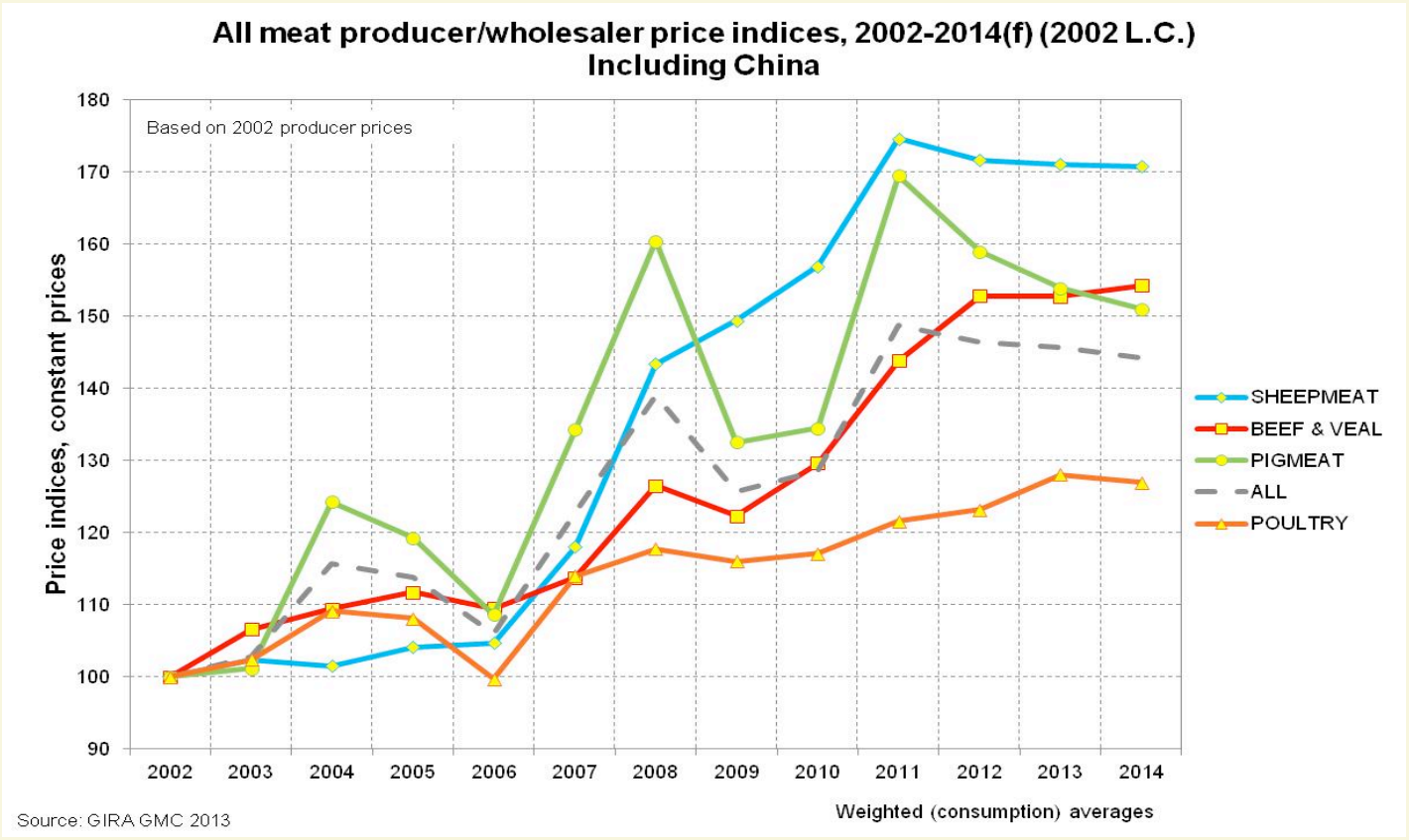


to the combination of feed cost pressure, rising animal welfare restrictions and demand concerns; For **2014 the pig and poultry price trend will be downward –** but **cattle and sheep prices will rise** as supply remains tight. Gira's global sheepmeat price index is even more heavily influenced by China than pigmeat.

Chinese meat prices are at an all time high, as demand continues to grow. China is exerting an increasingly important influence on the global meat market. For very many years China has dominated world pork consumption and therefore world meat consumption. Historically, because China was basically self-sufficient, with low meat prices and an insular approach what happened in China had little impact on the meat industry in the rest of the world. Those days are clearly over:

- Over the last few years, *Chinese prices have risen* and play a big part in the driving up the average world prices. Chinese prices have *become internationally attractive* to exporters … and are also designed to be motivating for Chinese domestic production, for which industrial production is replacing the traditional backyard sector – in some cases rather quickly.

- China has overtaken the Middle East & North



Africa to be the *largest meat importer in the world.* The volumes of meat imports continue to rise – to exceed 4.2 million tonnes in 2014f. This figure does not include variety meats: for which the volumes and price levels are highly attractive to exporters in other countries as well;

- The *range of cuts and the quality of cuts being imported is improving.* This again is well illustrated by sheepmeat – for which China has become the largest importer. This new import demand has a significant price impact, especially as the sheep trade is so dominated by Australia and New Zealand: both of which have faced drought problems in 2013, which will limit supplies in 2014.
- *More of the Chinese import trade is direct,* rather than being channelled through 'grey channels'. Greater transparency makes the trade more profitable and less volatile for exporters.
- *Major Chinese industry developments at home and abroad:* Shuanghui's 2013 takeover of Smithfield Foods is a dramatic development: with the world's biggest pork producer and processor now being Chinese owned. China is also one of the most dynamic markets for new investment - as illustrated by the opening of Cargill's new $250m integrated chicken project in Anhui … and many other projects and developments for all of the world's main industrial players.

Clearly Chinese import volumes are exceeding average global meat trade growth of around 2% in 2013 and 2014.

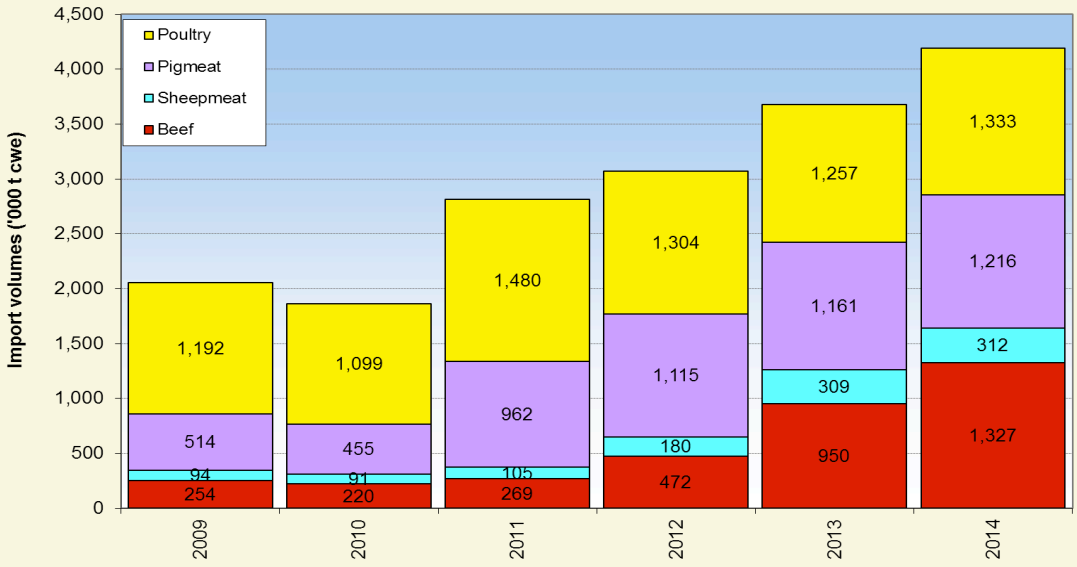
For **2014, poultry will show the greatest trade volume growth** which is enabled by higher production levels, as the feed cost problems of 2012/13 subside. Although very much more constrained by SPS trade barriers and religious preferences, pigmeat trade volumes will also increase again. In both species, trade volumes to emerging markets in Asia and sub-Saharan Africa are becoming increasingly important. The speed with which the US chicken industry has found alternate markets to Russia, for its by-product leg-quarter product is impressive and seems less prone to disruption than the red meat trade.

The growth in beef trade volumes is explained by the recent meteoric rise in Indian buffalo exports. Elsewhere, the beef export trade is constrained by supply. This will especially be the case in Australia, as farmers endeavour to re-build herds after the 2013 drought-induced de-stocking.

The pigmeat sector faces a better year ahead: but with some important disease risk factors in the form of ASF in Russia and PEDv in the US especially, and of course the cocktail of disease risk in China. These have the potential to be disruptive to trade and also to have a significant price effect.

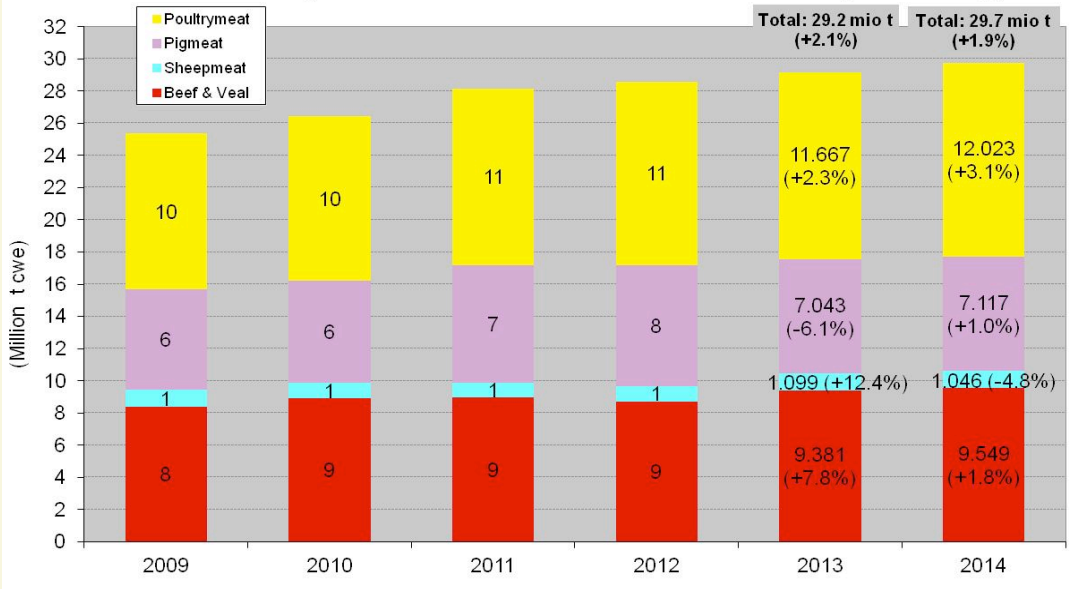
The repeated reference to the importance of China makes the Beijing venue for the IMS World Meat Congress this year in June especially pertinent.

Chinese Meat Imports, 2009-2014(f)



Source: GMC Dec. 13

Fig SYN-GEN International Meat Trade Volumes, 2009-2014(f)



Richard Brown

This article is extracted from some of the main findings from the December 2013 Gira Meat Club. A further article will follow the end-February Gira Asia Meat Club conference in Bangkok. Contact Richard Brown +44 1323 870144 for further details

NEW FAO PROTEIN QUALITY MEASUREMENT PROMISING FOR MEAT INDUSTRY

As the global population continues to rise, there is increasing pressure to provide adequate quantities of safe, nutritious food products in a sustainable manner. As part of its commitment to address this challenge, the recommendations of the report by the Food and Agriculture Organization of the United Nations (FAO) on dietary protein quality evaluation in human nutrition are promising for the meat industry.

The FAO Expert Consultation was convened for the task of:

- reviewing present knowledge of protein quality evaluation;
- discussing various techniques used in evaluating protein quality;
- specifically evaluating amino acid score corrected for digestibility.

The report supports the implementation of a new method of protein quality measurement, Digestible Indispensable Amino Acid Score (DIAAS). While further research is necessary to validate the method, this new approach provides a clearer picture of how each dietary protein source can meet our nutritional requirements for protein and amino acids.

Protein plays an important role in human health and well-being. Proteins are sources of essential amino acids, which the human body cannot produce itself. However, not all proteins provide the right amounts of these essential amino acids. With DIAAS, high quality proteins, such as the proteins from red meat and meat products, may score higher than when using the older method for assessing quality. It clearly demonstrates the superiority of animal proteins compared to plant proteins. It will provide decision makers and consumers with accurate information when assessing which foods should be part of a sustainable diet for our growing global population.

Old versus New Methods

This new method, DIAAS, will measure the digestibility of individual essential amino acids (EAA) in the small intestine as opposed to the previous focus on digestibility of proteins that was determined over the total digestive tract (PDCAAS method). The PDCAAS method tends to over-estimate protein quality of lower quality protein foods, such as vegetables and grains.

The key differences between DIAAS and the former PDCAAS are the amended rules around truncation of the score and that true ileal amino-acid digestibility is used for each dietary indispensable amino acid, rather than a single, faecal, crude-protein-digestibility value. The latter change is a significant step forward in accurately describing the absorbed amount of each of the dietary indispensable amino acids.

The true ileal amino-acid digestibility (the disappearance of dietary amino acids by the end of the small intestine) would preferably be determined in humans, but, when not possible, a workable solution would be in the growing pig (the preferred model) or the growing rat. For proteins whereby lysine may have undergone structural changes (e.g., processed foods, or foods that have been stored for prolonged periods of time), the true ileal digestibility of reactive lysine should be determined in addition to the true ileal digestibility of the other dietary indispensable amino acids.

There is an important distinction between amino-acid digestibility and availability. Digestibility refers to the disappearance of the amino acid during transit through the gut (assumed to be absorption), while availability refers to the uptake of an amino acid in a structural form that can be used for body protein synthesis. The amino acid lysine is particularly susceptible to undergoing chemical reactions with other food constituents during processing, some types of cooking, and storage. As a result lysine molecules may be altered structurally and thus rendered "unavailable." These altered molecules may be absorbed but cannot be used for protein synthesis and are excreted from the body. Thus, for some foods, determination of the digestibility of reactive (i.e., structurally unaltered or available) lysine is very important. The term "reactive" means that the lysine is in an unaltered form, whereby it can react with certain reagents.

The **proposed change in methods for protein quality assessment is significant to the red meat industry** and particularly in the nutrition therapy of vulnerable groups living in food insecure environments such as malnourished children, HIV

infected individuals, and pregnantor lactating women. In the regions where food resources become scarce, protein quality becomes extremely important.

Expert Speaker at IMS Sponsored Symposium

At the IUNS International Congress of Nutrition held in Granada, Spain, September 2013. IMS, through the Human Nutrition and Health Committee, highlighted the crucial role of high quality protein in a sustainable diet. Professor Paul J Moughan, Massey University, New Zealand, who was appointed Chair of the FAO Expert Consultation to review recommendations on the characterization of dietary protein quality in humans, spoke at the IMS sponored symposium. His presentation generated a lot of interest and discussion.

Dr. Moughan relayed that this new method heralds a sweeping change in how dietary protein quality is determined and described, and demonstrates the superior quality of animal proteins. Results will impact the red meat industry, food assistance programs and current standards in nutrition, particularly for vulnerable populations, such as infants, young children and the elderly.

Research Urgently Required

One of the conclusions of the FAO Expert Consultation was that before true ileal amino-acid-digestibility data can be applied in practice for the determination of DIAAS, more work needs to be undertaken to develop a robust inter-species regression relationship to allow the prediction of ileal amino-acid digestibility in humans based on data from the growing pig. Also, although published data on the true ileal amino-acid digestibility of human foods and protein sources exists, the Consultation concluded that research needs to be conducted to provide a more complete data set. Research is now needed urgently to generate the inter-species prediction equations and to provide a contemporary digestibility data set for human foods. Once such information is available, the new DIAAS system can become fully operational.

FAO Call for Experts

FAO is in the process of identifying experts to participate in a working group to provide recommendations regarding the best practice for a pig-based assay for true ileal amino acid digestibility determination and to extend the current limited data set of human, pig, rat true ileal amino acid digestibility.

Partnership with Dairy Industry

The International Dairy Federation has encouraged IMS to support the implementation of the new approach. Dairy representatives presented their position to the Human Nutrition and Health Committee at their recent meeting in Spain and touched on the potential for synergies within research groups and countries. Since conducting the research will be costly - approximately $1 million USD for 30-50 foods – alliances to pool resources seem to be the practical way forward.

The soy group has been quite vocal with concerns about the robustness of the science since the new method of protein quality will not be so positive for their products. To a certain extent, the onus will be on the animal industry to move the agenda forward.

Mary Ann Binnie
Canadian Pork Council
Chair, Human Nutrition and Health Committee

NEW PUBLICATION ABOUT GRASS-FED BEEF

U.S. customers choose to purchase "grass-fed" beef over grain-finished beef, for numerous reasons, largely **based on perceptions** including promotion of animal well-being, environmental sustainability and superior nutritional profile.

A recently published manuscript summarizes the nutrient and sensory quality data from published U.S. studies comparing beef from grass-fed to that of grain-finished cattle. In the U.S., grass-fed beef appears to be leaner than grain-finished beef but largely at the expense of monounsaturated fatty acids, which can help lower bad cholesterol levels in your blood as well as lower your risk of heart disease and stroke.

Both U.S. grass-fed and grain-finished beef contribute similar n-3 fatty acid content, predominately in the form of linolenic acid. In addition, lean beef from either grass-fed or grain-finished cattle, can make a modest impact to n-3 long chain polyunsaturated fatty acid intake goals while contributing a limited amount of total fat to the diet.

Bottom line, regardless of feeding regime, evidence

from U.S. studies suggests that beef from both grass-fed and grain-finished cattle contributes a wide variety of important nutrients to the U.S. diet and consumption of either can be compatible with efforts to improve the overall diet quality of Americans.

Van Elswyk ME, McNeill SH. Impact of Grass/Forage Feeding versus Grain Finishing on Beef Nutrients and Sensory Quality: The U.S. Experience. Meat Sci 2014;96(1):535-540.
Available at:
http://dx.doi.org/10.1016/j.meatsci.2013.08.010

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IMS SUPPORT TRANSFORMS AGRICULTURE CO-OP IN SOUTH AFRICA

In keeping with its commitment to fight child hunger, the IMS has helped transform a farming village in the remote Venda region of South Africa, where as many as 40% of children suffer chronic malnutrition. Through a charitable donation to The Six-Second Project, the IMS helped facilitate capital investments in the community's farming co-operative, which included a hen house and pullets, a water catchment system, shade cloth to cover hydroponically-produced crops, and ongoing business and operations training for the farmers involved in the co-op. These investments have provided high-quality protein and nutrition for the farmers' children, as well as a sustainable means of income generation for the co-op members, who are now able to sell their excess eggs and crops to the surrounding community. Global Meat News, the official media sponsor of The Six-Second Project, highlighted the IMS's role in this effort in a photo gallery found at this link: http://www.globalmeatnews.com/Industry-Markets/In-pictures-The-Six-Second-Project-in-South-Africa.

The Six-Second Project is a non-profit charitable organization with a mission of finding and funding sustainable hunger solutions, primarily through improved crop and livestock production techniques. Based on the FAO statistic that a child dies of hunger every six seconds, The Six-Second Project is recruiting meat industry support because of the key role animal proteins play in preventing malnutrition and ensuring proper growth and brain development among children. The Six-Second Project is challenging the meat industry to help raise awareness and funds for additional hunger-fighting projects, and to help identify sustainable and affordable livestock-based solutions to help fight child hunger. For more information about The Six-Second Project, please contact Jody Carman at jody@thesixsecondproject.org / 001-720-284-2193.