



South America's Vital Role in the Evolving International Honey Market

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(Courtesy of American Bee Journal)

Introduction

It is a great privilege for us all to meet at the intersection of the borders of Argentina, Brazil and Paraguay. We meet by one of the World's Great Natural Wonders, the majestic Falls of Iguazu.

This precious site is a place of enormous bio-diversity, complex ecosystems and a site where zoological and botanical life are bound together in complex interaction and interdependency. It mirrors and manifests the overall features characterizing how bees and flowers interact and produce this wonderful and diverse natural product, honey. Perhaps never before in human history has the role of the honey bee been so appreciated, and the need so clear to protect and cherish this pollinator whose inexhaustible energy and remarkable intelligence are crucial to producing, in many countries, a third of the human food supply.

The global honey market has grown in recent years and concurrently the health and vigor of the global supply of bees has grown more at risk. Within the overall international honey market, South America's honey production has continued to play a vital role. I want to discuss the Geopolitical Environment, Production, Statistics and Prices, Honey and International Law, China, Honey and Science, Honey and Health, and the Creative Marketing of Honey.



Speakers' platform of the XI Congreso Latinoamericano de Apicultura 2014. This meeting was attended by 1,300 beekeepers, honey exporters, scientists and government officials from South America, Central America, Mexico and the Caribbean.

I. The Geo-political Environment

Throughout our world, beekeepers and the global honey market are affected by many variables including geo-political instability, changing currency relations, climate change and climate volatility, the need to preserve vigorous populations of bees and other pollinators, demand for pollination services and major changes in crops used for bee forage. Given the deepening global interdependence of major economies in the North and South, East and West, honey producers must have an objective and comprehensive understanding of the dynamics of the international marketplace for honey. The shifting global trends in production and export of honey must be better understood. In the past, beekeepers were focused on their arduous tasks of producing honey and were not as aware of the international market. In the contemporary world, beekeepers, exporters, importers and packers are much more informed as to current conditions and trends. All segments of the market, including retailers and manufacturers, are better informed. This is an era of transparency and comprehensive information.

Honey producers in South America enjoy an increasingly important and vital role in satisfying the worldwide demand for honey, including white and dark, conventional and organic. The production of many important foods, including fruits and nuts rich in phyto-chemicals and anti-oxidants, depends upon pollination by bees and, therefore, healthy and vigorous bee populations. The health of both bees and the global human family are deeply and increasingly interconnected. Humanity as a whole more insightfully understands this interdependence.

As we meet by this beautiful natural wonder of the world, Ukraine, one of Europe's main producers of honey and supplier of a significant percentage of Germany's honey requirements, is immersed in an intense civil conflict. As western Ukraine, the center of Ukraine's honey production, more deeply integrates with western

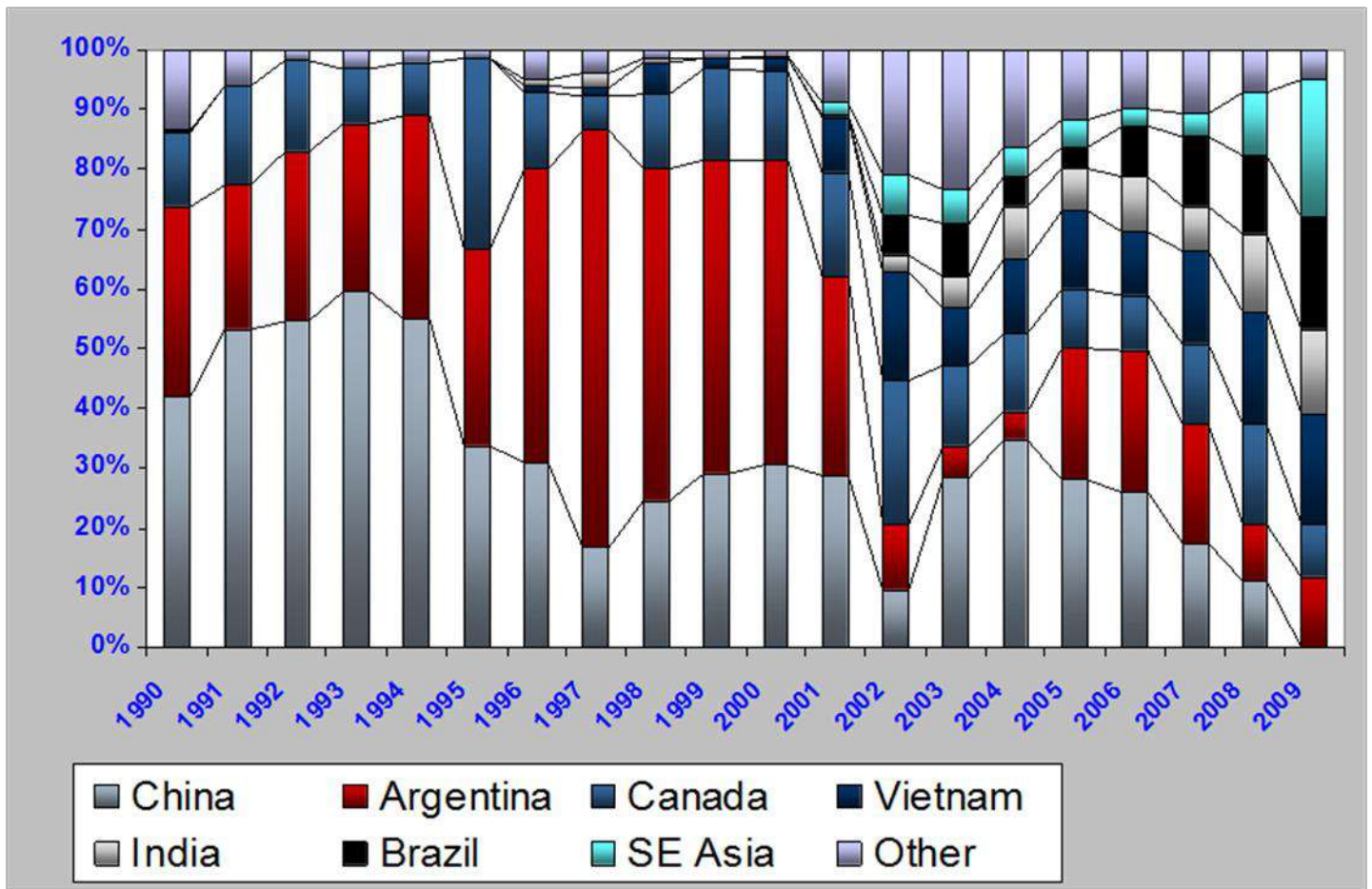
Europe, the demand for Ukrainian honey will undoubtedly increase in countries like Germany. Concurrently, turmoil and anguish spreads throughout the Middle East and threatens the world with instability. The Middle East is an important area of honey consumption. Geo-political turmoil and sectarian violent conflicts threaten both the production and consumption of honey. The global economy, as a whole, remains in a tenuous and weak recovery, after an era characterized by the illusion of “No Ceilings” for stock markets and real estate valuations prior to the financial crisis which led to the Great Recession beginning in 2007-2008. The world is still struggling to escape from the grips of that great recession and the economic polarization among and within nations. No industry, including the international honey industry, can escape impact from the tightly woven geo-political, economic and environmental realities propelling humanity into an uncertain and complex future.

II. Statistics, Production Trends and Prices

The past decade has witnessed many changes in patterns of global honey trade. These patterns are also influenced by economic health, and the emergence of stronger economic growth in the developing countries.

- A) **Overall world patterns of production.** Argentina and the US have experienced declines in total honey production, productivity per hive, areas available for bee forage, and the percentage of honey that is in the lighter color range (less than 50mm). It is unlikely that crops in either the US or Argentina will equal previous bumper crops of 100,000 metric tons with significant percentages of white color (5-34mm). Both countries have seen the use of land for dairy farms and cattle ranches decrease and the cultivation of soybean and corn increase. In this respect, these 2 countries mirror each other. While there are still bumper and short crops, such fluctuations occur on two widely separate planes. A poor crop of previous decades is still much larger than a bumper crop of recent decades.
- B) **Honey production in Ukraine has provided significant quantities for export to Europe.** Total honey production in Asia, according the FAO reports, has been increasing. In an era when there has been extensive transshipment of honey to avoid either duty or quality requirements, there is considerable skepticism if the data represents actual production of pure honey. On the other hand, countries like Vietnam received considerable support in recent decades from the World Bank and other groups and developed significant coffee bean, cashew nut and honey production, including the development of new floral sources like *Acacia mangium*. Shifts in the honey qualities being produced will eventually lead to changes in the specifications offered to end users at the retail and industrial levels. The industry can market only what is produced.
- C) **US Honey imports.** The U.S. National Honey Board reports that total consumption of domestic and imported honey has continued to rise in the past decade, despite substantially increased prices for honey. In 2013, according to the National Honey Board, the assessments of U.S. produced honey declined to 55,000 metric tons and imported honey accounted for 75% of all honey recorded by the National Honey Board (150,765 metric tons imported in 2013). Total U.S. production may have been around 65,000 metric tons.

U.S. Honey Imports 1990-2009 by Country (as provided by Dr. Stan Daberkow)



D) South America. In 2013, Argentina was the largest volume exporter to the U.S, at 43,700 metric tons, despite delays in shipments in the first quarter of 2013. The import volume from Argentina of 2013 was increased by 4.3% over the preceding year. Brazil's exports have shifted from European destinations to American buyers in the past 2 years, and from January to July, 2014, Brazil shipped 14,000 metric tons to the US, a significant increase over 2013. Brazil is a very significant producer of certified organic honey exported to the US and Europe. Uruguay, in contrast, had a decline in export volume to the US in 2013 compared to the preceding year. The success of South American exporters in the U.S. market is directly related to the good quality and value of the honey that they produce, which American honey packers have made an important part of their products of all kinds. Dependability is also an important aspect of this success.

Total Imports and USA Domestic Honey Use

2013	201,569 tons (444,379,800 pounds)
2012	192,681 tons (424,786,500 pounds)

Imports were about 75% of total in both years

Argentina, Brazil, Chile and Uruguay provided 33% of the honey bought in 2013 in the USA and 44.5% of all honey imported in 2013

E) Price trends and contrasts can be seen in the history of prices for White honey from the U.S., Canada, Argentina and India. In 2013, Canadian White and ELA were imported at over \$2/lb., a jump of 17% over 2012 imports of Canadian white honey. Argentine white and Indian white were imported at average levels of \$1.50/lb. and \$1.23/lb., respectively, during that period. Currently, because there is a good, very white crop in the U.S., U.S. white honey prices have declined about 5% relative to the 2013 crop.

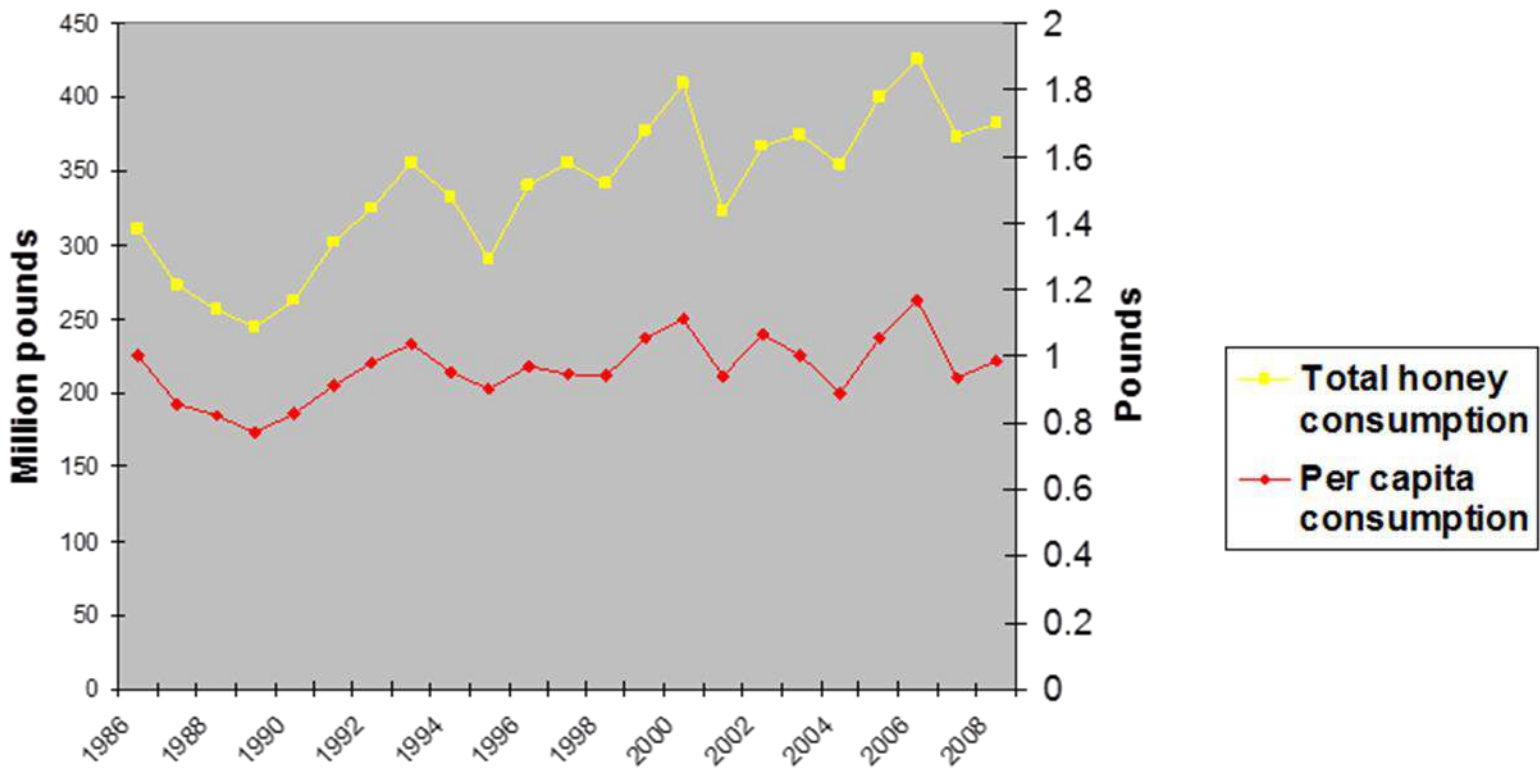
2014 US Honey Average Prices		
US White	\$4410 – 4850/ton	(\$2.00-2.20/lb.)
Canadian White	\$4744-4755/ton	(\$2.15-2.16/lb.)
Argentine White	\$3727 -3800/ton	(\$1.70-1.72/lb.)
Indian White	\$3110-3238/ton	(\$1.41-1.46/lb.)
Source: National Honey Report – Vol. XXXI V #7		

- F) Chinese honey exports, which totaled 125,000 tons in 2013, are being directed primarily towards Japan, the United Kingdom, Belgium and Spain.** A very small amount of honey from China was imported into the U.S. in 2013 at a level of \$1.60/lb. for white color and an average price for all colors of \$1.34/lb. or about \$2,950 per metric ton.
- G) Price Inflection Point.** It must be noted that there is already growing resistance among food retailers and buyers who use honey as a food ingredient in their products to the sharp escalation of prices for honey experienced during recent years. The grocery stores and mega-retailers have become tremendously integrated and consolidated through recent decades of mergers, acquisitions and bankruptcies. This means that there are fewer, but bigger, buyers wielding more control and influence. Furthermore, there are mandates from large corporations to understand as fully as possible the various cost structures involved from raw materials to processing to delivery. In an era in which traceability and transparency are important to large corporations, the industry has no choice but to provide the information they seek.
- H) This process of consolidation has affected the financial industry, agriculture, retailing and manufacturing in the food sector.** Retailers and manufacturers have more centralized, powerful and informed centers than in prior decades. Ten bakeries became a hundred, 100 retail stores became a thousand in this era of mega-retailers and mega-manufacturers. The process continues unabated. Given their buying power, sophistication and the imperative to keep prices as reasonable and stable as possible, the emerging imperative is for stability and relaxation of price escalation. The overall fragility of the global economy strengthens the growing imperative for price stability.
- I) To ensure a vigorous market for honey it is important for all segments of the industry to realize that we must prevent the illusion that year after year there can be an inexorable escalation of prices without any relaxation.** This is an important lesson at this moment when the industry has achieved a healthy increase of the incentive for the producers. It is an important component of preserving the incentive to consume honey at the retail level and as a food ingredient.

J) During the past few years, efforts have been made by some to dominate market share by entering highly speculative contracts for large quantities of honey to be shipped over long periods of time at fixed prices. This imprudent and aggressive speculative behavior, aiming at domination of market share, has resulted in huge delays in shipments, cancellation of contracts, and re-negotiation of contracts, creating a lack of adequate supply, timely delivery and the continuity of supply needed by packers. On the other hand, it has also resulted in significant losses for some producers and exporters, in some cases up to \$500 per metric ton was lost to fulfill these speculative contracts. America's largest beekeeper, Richard Adee, has often quoted his father who advised that one should sell based neither upon the bees in the hive nor the flowers in the field, but rather on the honey in the drums. Currency valuations reflect geopolitical relationships and have created shifts in export patterns. Brazil, Argentina and Uruguay have increased their exports to the U.S. while the US dollar has been strengthening relative to the Euro. The volatility of currency rates within a world of economic stress and increasing conflicts is being compounded by the active presence of black market rates which may be two times greater than official government and bank rates. Such disparities create opportunities for manipulations that lead to multi-tiered markets, such as those created by circumvention of honey.

Due to an international shortage of export quality honey, increased production costs, acute shortages of white honey, reduced production per hive, prices for honey have sharply risen during recent years. Despite rising prices for honey, consumption has continued to rise with new markets developing. Dr. Ron Ward was commissioned to submit a report to the U.S. National Honey Board, which revealed that utilization of US and foreign honey has increased yearly in the past decade. However, the per capita consumption remained flat, around 1 pound per person, from 1986-2009. There is growing concern that in the absence of more creative marketing and product development, honey consumption will reach a point of inflexion where sharply increased prices provoke a decline in both total and per capita consumption.

U.S. Total and Per Capita Honey Consumption (1986-2009)



Both packers and producers will be better served by a prudent and responsible step-by-step approach. The abiding challenge, which we all must come to embrace, is that the incentives to produce at the beekeeper level and to consume at the level of the mass market must be harmonized.

The beekeeping industry, by virtue of the vital pollination services it provides generic agricultural interests, has become an integral part of global agriculture. As such we should bear in mind the old adage well known to farmers throughout the world. “Low prices are their best cure and high prices are their best cure.” Low prices reduce production and reduced supply tends to increase prices. High prices increase production, which increase supply relative to demand, causing prices to relax or decline. Charts for corn, soybean and wheat prices embody messages we cannot wisely ignore. We were just in the U.S. heartland of corn and soybean production. Farmers report that there are not enough storage silos, trucks, or trains to store and transport the huge amounts of corn and soybeans that have been harvested. Storage facilities already contain carry over from the 2013 harvest. Increases in production were driven not only by favorable weather, but a quest to chase historically high prices. In contrast, due to drought in major producing countries during inopportune times, coffee production declined and prices increased over 50% during the past 8 months.

The honey market during the past several years has suffered changing and stressful relations of supply and demand. With lower production of white honey and increased demand for quality honey, prices have risen. Fortunately, consumption has also been rising in a parallel pattern. However, there are signs on the horizon of resistance to increased honey prices, and there is always the possibility of shifts to lower-priced alternative sweeteners, such as sugar, high fructose corn syrups, rice syrup, and new fruit syrups, which are abundantly

available. We want to be sufficiently wise so we avoid reaching an inflection point which will be detrimental to the industry's strategic interests.

III. Climate Change

The U.N. Climate Report of 2014 verifies what farmers experience with increasing awareness; that is, the severity, frequency and volatility (unpredictability) of climate disasters leads to a situation which precludes our ability to accurately predict specific events, while general trends are increasingly obvious.

Throughout the world, droughts, floods, heat waves, and forest fires ravage the globe. California is currently suffering the most severe drought in a century and water reserves are being exhausted. Almond and citrus farmers have cut down significant percentages of their trees because water supplies are inadequate to sustain the entire groves and orchards. Currently, areas of New York had their heaviest rains ever. Iguazu a month or so ago had more rain in a day than was typical for the month in which that day fell. El Ninos and La Ninas appear and disappear, with irregularity. Australia, like California and western Canada, suffered severe drought and fires. News reports stated, "The drought has already pummeled farmers in California, which is home to the nation's largest agricultural sector. So far this year, about a third less water than usual has been available to the state's farmers" (*New York Times*, July 16, 2014). At various times, California has been the leading producer of honey in the U.S. Significant portions of California's honey crop have been white sage and buckwheat honey, both of which are dependent upon rainfall rather than irrigation. The total California honey crop will be affected by the severe drought of 2014. Parts of north China are being affected this summer by their worst drought in history. Alberta, Canada had snow in late summer. Volatility and sharp contrasts are indicated by all the scientific evidence.

The exacerbating dilemma with climate change concerns not only accumulation of carbon dioxide from industrialization, the global population growth, the car culture and materialism. Many of these processes are self-feeding and therein "lies the rub." For example, as glaciers and the ice pack covering the Arctic melt, the perma-frost retreats, and the light colors that reflect back into space 95% of solar energy are replaced by darker colors, which absorb solar energy. When vast stretches of the Earth's forests burn, not only are vast stores of carbon released into the atmosphere, but the planet loses the forest of trees which absorb and sequester carbon. When the perma-frost retreats even more powerful heat-trapping gases like methane – 25 times stronger than CO₂ – are released after millennia of entrapment below the perma-frost. These changes threaten humanity's ability to feed its steadily growing population, no less to increase production of honey.

IV. International Law and Honey Trade

The past two decades have witnessed the interplay of tariff and non-tariff trade barriers. These issues have been especially intense in the U.S. marketplace. These issues concern problems of adulteration of honey with 1) other sweeteners like rice syrup; 2) ultra-filtered honey; and 3) immature, unripe honey. Because of such concerns, there are serious efforts being made in the U.S. to establish and enforce a Standard of Identity for honey.

Mislabeled country of origin has been a pervasive problem. Such mislabeling has been the hand maiden to transshipment of honey to avoid prevailing anti-dumping orders. The well-publicized problems of circumvention of anti-dumping orders through transshipment of honey via over 20 countries, have resulted in the arrest and assessment of fines for those engaged in conspiracies and collusion to circumvent U.S. antidumping duties through transshipment by means of third countries.

Illegal schemes have been found to be diverse and shifting. U.S. pollen expert Prof. Vaughn Bryant has found Chinese pollen in honey from many Asian sources. He observed, "Honey with no pollen or too little pollen, pollen from other countries than the exporting country, and too much pollen." U.S. Customs has investigated many products which have appeared in various cunning disguises. Their investigations in Chicago, Seattle, Los Angeles, Houston and Jacksonville have led to arrests, fines, jail time, deferred prosecution agreements, bankruptcies and at least two disbarments of individuals from the U.S. honey industry. These efforts to bring the rule of law into the honey market are ongoing by the U.S. government Homeland Security, ICE and the U.S. FDA.

As is well known, Chinese honey has been subject to very high anti-dumping orders. The assessment of anti-dumping petitions has utilized Surrogate Country Analysis, typically using India as the surrogate even though 15 years ago India exported no honey to the world. As part of the bi-lateral agreement for China's entry into the WTO, in 2016 China would no longer be subject to Surrogate Country Analysis. If, and when, that change occurs, then antidumping duties on Chinese honey will unlikely remain at the prohibitive USD2.63/kg. level.

In general, the world is moving towards greater economic integration, free trade agreements, reduction of trade barriers and harmonization of standards, realistic and reasonable tolerance levels and testing limits for residues. The participation of any nation in freer and more open economic integration will be, however, conditioned and facilitated by adherence to international law.

V. Chinese Exports

Chinese official honey exports, which totaled 125,000 tons in 2013, are being directed primarily towards Japan, the United Kingdom, Belgium and Spain. A very small amount of honey from China was imported into the U.S. in 2013. Some special comments on China's potential role within and effect upon the future of the global honey market must be made if we are to have the ability to anticipate the future. If in 2016 or soon thereafter, anti-dumping petitions against China are assessed by China's direct economic data, the impact will be large. China is a vast land with many types of climates, topography and an immense diversity of floral sources that produce honey. Those floral sources can produce honey with a wide range of colors from amber to water white honey. China produces not merely more honey than any other country, but an enormous diversity of flavors and colors. China's white honey includes acacia, linden, clover, chaste, orange and alfalfa of excellent flavor.

The corruption that has involved so many Chinese engaged in fraudulent behavior does not endear China to the international honey trade, no less to the important U.S. market. Furthermore, the adulteration and contamination of Chinese honey has evoked concern about food safety of honey in the domestic markets of China and India.

These concerns have been expressed in the mass media of both countries. China's new President Xi Jinping has declared and is implementing a policy of weeding out corruption in both high and low places to catch both "tigers and flies." If this policy is effectively implemented, China may regain an important, even a dominant, position in the U.S. honey market, which has experienced significant shortages of honey and escalation of prices. It is worthy to note that cooperation between Chinese and EU customs has been effectively addressing problems of mislabeling and undervaluation of goods entering the European Union, involving 1,500 containers, according to recent reports.

China is also appearing on the international scene with new ambition. Through a policy of Direct Outside Investment (DOI) China has been aggressively purchasing mines and farm lands throughout South America and Africa, and factories in Italy, Germany and elsewhere. Purchases include financial institutions, major food manufacturers, farms, mines, petroleum fields, retailers and exporters. Chinese companies have bought prized farm land in California and even sought to buy beekeeping operations in the U.S.A. Chinese companies, directly and through surrogates, are aggressively establishing vertical, horizontal and international economic integration. This could involve Chinese and foreign companies at many levels. To what extent this will affect, and already has affected the South American, Asian and North American honey industries is a good and deep question.

Already in Latin America we learn that the largest exporter of honey in Uruguay, Nidera, has been purchased by a major Chinese company. In Argentina, Chinese companies have sought to buy honey companies and build homogenizing plants to blend less expensive Chinese honey with high quality Argentine honey and then export such blended honey as Argentine honey.

Proposals have been made that Argentina import, blend and re-export the blended honey. Those proposals have been greeted by opposition from beekeepers and exporters of honey, as well as agriculture officials. Prof. Norberto Garcia has asserted that, "We spent decades educating and training beekeepers in producing high quality and safe honey. To adapt the proposal would inevitably destroy all the hard work we have done over these decades. We all know low price means low quality. We are determined to preserve the quality, which is the foundation of the pre-eminence of the Argentine honey industry in the international market." This position is supported by Argentine beekeepers. Progress in marketing honey to make it more attractive to consumers should be made by improving the quality of honey, not raising questions about the country of origin of South American honey or blends with questionable and inferior quality.

Developed and economically advanced nations, we must note, lobbied hard over the past three decades to get China to open its markets for western, Japanese and Korean investment, joint ventures, and solely owned foreign enterprises in the banking, manufacturing and retail sectors. That precedent and World Trade Organization rules may render China's Direct Outside Investment a growing factor in the international honey trade.

VI. Honey and Science

There are several arenas in which advanced scientific research is necessary when we consider both bees and honey.

- A)** The first area is bee health. The world witnesses with increasing concern the stress nature's pollinators are facing. Bees are suffering problems with mites and parasites, and more recently, Colony Collapse Phenomena. Modern beekeeping and agricultural practices are playing their role in a multi-variable phenomenon. As much of North American agriculture has become dominated by mega-sized family farms and even larger agro-businesses, and concurrently wild and fallow fields have been converted to soybeans for the Asian export market, corn for bio-fuels, and so on, bees have been subject to mono-diets. If human beings were to eat for their entire life merely one type of food, their health would suffer. In addition, bees serving the broader pollination needs of agriculture undergo long journeys, often coming out of winter. I remember talking with a Professor at Sao Paulo University, Brazil, who had spent his academic life studying African bees. Though extremely vigorous and aggressive, Africanized bees suffer great stress when subject to loud noises and confinement in the dark.
- B)** Furthermore, there is growing evidence that the use of neonicotinoids harms the nervous systems of bees and the memory functions needed to return to the hive. The disappearing bees phenomenon is a national disaster for many beekeepers. The predicament of neonicotinoids is ultimately linked with the development of Genetically Modified Organisms (GMO) like the soybeans and corn grown in the U.S. and elsewhere. The resistance of GMO plants to disease and pests is directly correlated with the production of pesticides, herbicides and fungicides produced by the chemical giants who genetically engineer GMO seeds for major crops. This problem is under active discussion in the U.S. Environmental Protection Agency (EPA) and the judicial systems of several countries.
- C)** South American bees at present seem less plagued by the colony collapse phenomena. However, beekeepers in South America and the Ministries of Agriculture should bear in mind the lessons from Europe and North America. Providing diversified natural habitats for bees, monitoring migratory bee practices, and limiting use of neonicotinoids which seem to be destructive of the nervous systems of bees would be constructive steps helpful to protecting nature's most effective and important pollinators. We should try to learn from others and not repeat their mistakes.
- D)** Recent scientific studies are altering our understanding of the diverse genome of the honey bee and raising interesting questions regarding whether the honey bee originated in Africa or Asia. Other scientific studies at the University of Indiana are shedding new light on the complex metabolic processes of the honey bees. These studies of the bee's genome and its complex metabolic processes ("we are what we eat") are relevant to both the chemical profiles of honey, the quality of honey, and possibly the health benefits of honey.
- E)** As major honey-consuming countries become more dependent upon international sources of honey, the chemical profiles of the global diversity of honey types must be better understood. The multiple variables of production, season, climatic conditions, and processing methods that influence those chemical profiles must be established through scientifically authenticated primary samples. That process is far from complete. To complete this scientific imperative will involve the cooperation of beekeeping organizations, independent university research laboratories and government laboratories. Essentially, this is part of the mandate of the World Trade Organization to reduce, not entrench and enshrine, non-tariff trade barriers as the world works to create bridges, not walls, among nations. South American must contribute to this effort because

countries like Argentina, Brazil, Uruguay, and Chile already produce some of the world's most important and prized honeys from a wide diversity of nectar sources not found in the Northern Hemisphere or found, but produced in different environmental conditions. The absence of a comprehensive data base and knowledge of relevant variables affecting chemical profiles has led to false positives of adulteration. We must adhere to the correct principle: Science First, Standards Second.

- F)** FDA scientists and mathematicians composed a Research Protocol entitled: "International Investigation into the Chemical Composition of Honey; Preliminary Collection Outline." It was composed at a time when nations like Brazil and Vietnam played a far less prominent role in global honey trade for either conventional or the emerging and attractive organic honey trade. The chemical profile of honey must include pollen analysis and many other parameters. We have to understand the profiles of both unprocessed and unfiltered honey and processed and filtered honey. The research protocol states:
"As import restrictions have been removed with the adoption of new trade agreements, questions regarding the authenticity of commodities such as honey have come forth. The use of various isotopic methods, such as stable carbon isotope ratio analysis (SCIRA) have proved to be useful in the efforts to detect adulterated products. However, these isotopic methods are based on the database of samples used in the establishment of the test parameters....If the database is not representative of the particular commodity, then the method will be valid only for samples covered by the database. At the present time the database concerning the chemical composition of honey (sugars, protein, HMF, etc.) is sufficient for U.S. honeys, but is lacking with reference to samples from other countries. It is our intention with this study to provide a more international database of values for the chemical composition of honey."
- G)** Honey does not dwell in a Mythical Realm of Ultra Purity. That mythology, which would paint the honey industry into a corner, would be sustainable in the modern world if, but only if, honey bees and the nectar sources they pollinate dwelt in a Realm of Invulnerability to Pests and Diseases.
- H)** Since that is not the case honey must be given reasonable tolerance levels and testing limits for residues. Those levels must be based upon legitimate food safety issues and take into account, as health benefits must, Average Daily Intake (ADI levels). Some have argued, for example, that since other products like beef, chicken, shrimp, eggs, cheese, and butter (whose ADI levels are so much higher than the per capita level of honey consumption), have collectively "filled the basket for antibiotics consumed in food," there is no room left to provide tolerance levels for honey.
- I)** At the same time, the excessive use of antibiotics in animals as a growth stimulus is creating antibiotic resistant bacteria. This has led to a movement in the U.S. Congress and by the public to ban the use of antibiotics in animals as a growth stimulus and confine such use to the prevention or curing of diseases. The U.S. FDA is being asked to restrain the use of antibiotics as a growth stimulus, so that the overall use will be reduced and, thereby, the door can be opened to tolerance levels which the honey industry both needs and deserves.
- J)** We do not need to test the testing machinery. We need to protect human health and bee health for bees are crucial to the ability of the planet to provide one-third of its food supply, including some of the most important fruits, nuts and vegetables which themselves play a crucial role in human health. The task is to intelligently integrate the protection of humans and bees.



The majestic Falls of Iguazu, one of the world's great natural wonders, located near where the XI Congreso Latinoamericano de Apicultura convened in Argentina.

VII. Honey and Health

In 2007, the Committee for the Promotion of Honey and Health held its first scientific symposium in Sacramento, California, during a joint meeting of the two main American Beekeeping Associations. Our effort aimed to use good science to understand the attributes of honey which conferred health benefits from the consumption of this ancient and revered product of nature. These efforts were stimulated and supported by successful efforts in other industries including the almond, wine, tea and chocolate industries to use good science as a marketing tool to increase appreciation of the value of these foods. These efforts helped transform the industries. Not only did consumption increase, for example, in the tea industry which increased from a 1 billion dollar industry to a 10 billion dollar industry, but the variety, quality and value of the products increased dramatically. After 2 decades of research on tea and health, it was reported this week in 2014 that: "Drinking tea is associated with 24% reduced non-vascular mortality, reveals a study of 131,000 people presented at European Society of Cardiology by Dr. Nicolas Danchin."

During the 1st International Honey and Health Scientific Symposium we had scientists from the US, Australia, New Zealand, Switzerland, India and Scotland present scientific papers. The topics covered included the role of honey in diet, sleep, cough suppression and stress reduction. Recent research conducted in Lund University, Sweden, suggests that fresh honey contains 16 or more components which can destroy bacteria which through genetic modification have grown resistant to the current array of antibiotics and therefore, pose a severe medical challenge to physicians and hospitals.

I have participated drafting a proposal that the honey industry develops international support for research and publicity of the honey and health message. We hope this will be discussed in next year's Apimondia in South Korea. We also hope that research universities and hospitals in South America will make a significant contribution to this agenda and utilize science to develop the Health and Honey theme.

VIII. The Creative Marketing of Honey

It is time for the international honey market to be refreshed and invigorated by a shift to using our financial, intellectual and marketing resources to develop a positive marketing approach as other natural foods have so successfully done during recent decades. The history, romance, beauty of production, diversity of types, colors, flavors and health benefits of honey rival these same features in wine, nuts, tea, coffee, and fruits. But these are largely untapped and underdeveloped resources for the honey industry. We must transform this situation.

The wine industry sells wines from all over the world, including Argentina, Chile, Australia, France, Napa Valley, Germany, Italy, etc. The beauty of the wine country has been so skillfully conveyed to consumers that wine tours and travels to vineyards have become routine. The diversity and intrigue of different qualities and flavors of coffee, wine and teas are appreciated by consumers and connoisseurs. The arts of producing and judging coffee, wine and tea have been romanticized, bringing to consumers' attention the qualitative distinctions. The arts of producing honey and judging its quality are also intriguing, but little known, to the urban and suburban populations representing 90% of the consumption of honey.

The success of marketing efforts is best assessed by increase of per capita consumption, consumer perception of value, and increase of prices. Creative marketing in the wine, honey and tea industries, all resulted in increased volumes, higher qualities, and greater varieties.

Creative marketing is also manifested by the extent to which a younger demographic is attracted to the product and perceives its value. The contemporary world is characterized not only by increased international economic interdependency, but also by the presence of an international component of culture, which can be effectively used in product development and marketing.

Product development is a key life line to the health of an industry. The honey industry needs new products whether honey beers, honey sports beverages or others. Responding to consumer demands in an increasingly health conscious demographic will lead to a modern and evolving market place in which filtered honey, raw honey, organic honey, GMO-free honey, local honey and international honey will all find their respective places.

The health message for honey, which is evolving and intriguing, stands in contrast with the message for other competitive sweeteners, for which consumers' perception of health risks is increasing. As the human population becomes less rural and more urban and suburban, people crave to and enjoy re-

connecting with nature and agriculture. The honey industry has a story of health and beauty to creatively unfurl.

Quality is a crucial feature. If, and when, companies market under whatever beautiful label poor quality and poor flavored honey in service of selling at low prices, they debase the product they should love. Experience in Europe and elsewhere is showing that while some companies choose price over quality, consumers ultimately choose quality over price. This is especially true of small luxuries like honey, where the impact upon family budgets is modest.

South America has spectacular areas of honey production. South America produces some of the most diverse and high quality honeys, both conventional and organic. The same is true of North America, Europe, Australia and Asia.

Conclusion

We have entered a new global situation which can be described as:

The Era of Comprehensive Information
The Era of Transparency, Traceability and the Rule of Law
The Era of Enhanced Food Safety
The Era of Creative Marketing

The task is before the international honey industry. Honey has rightly and poetically been called the “Soul of a Field of Flowers.” Let us work together to market honey, its romance, history, beauty and health benefits, so this ancient natural product will be perceived and valued in the future even more deeply than in its revered past.

The above material is from the speech presented to the XI Congreso Latinoamericano de Apicultura 2014, which was attended by 1,300 beekeepers, honey exporters, scientists and government officials from South America, Central America, Mexico and the Caribbean.

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