



INTERNATIONAL HONEY MARKET

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(Courtesy of American Bee Journal)

Introduction

The international honey market has rarely been so dramatically influenced by geo-political and macro-economic factors as it is at present. The world, even without consideration of the turmoil among and within the nations of the Middle East, is in a turbulent state. The market is being shaped by plunging currency rates, zero interest rates in which depositors in Europe must pay “interest” to banks to hold their deposits, a fragile and sluggish global economy, rapid price declines in many major, but interdependent, commodities, military conflicts, and climatic volatility. In 2008 bubbles burst and the Great Recession fell over the world. Do the abnormalities in the present global economic situation foreshadow the bursting of new bubbles whether in the East or West?

The class action lawsuit brought by American beekeepers against Groeb Farms, Honey Holding and their partners is reportedly nearing settlement. The existence of that class action suit and its impending resolution manifests the reality and severity of harm caused by a decade of Honey Gate! At this time we are living with the legacy and continuation of circumvention and transshipment by old and new players.

The American honey market may also be profoundly influenced by changes in the U.S. law, especially the scheduled termination of Surrogate Country Analysis in 2016 for Chinese antidumping cases, which was pledged in 2001 by the U.S. and Chinese governments as a condition for China’s entry into the WTO. There are efforts underway to obtain a U.S. honey standard of identity that can effectively be enforced. Senator Bob Casey (D-PA) called on the FDA to adopt a federal honey standard of identity in a letter to Commissioner Margaret A. Hamburg in March, 2015.

As the international honey industry inches towards greater integrity, there are many players who want to put on the white robe, mount the white stallion and gallop back into the U.S. market which is now more than ever before the preferred consuming market for international honey exporters. This preferred status reflects both the strength of the U.S. Dollar and the perception of relative economic strength and stability.

There are many recent developments in the international market involving consolidation, revitalization of honey companies and processing plants, reflecting a strategic aim of horizontal and vertical integration. Every week more examples emerge of Chinese acquisition of foreign companies directly and through surrogates.

Chinese companies have acquired or established honey companies in 4 of the 5 continents. There are also invisible threads linking many of these seemingly diverse internal and external phenomena.

Within the U.S., the long and drawn out longshoreman’s work slowdown created turmoil over several months beginning in August, 2014, with delays for vessels docking at west coast ports exacerbating supply chains and creating congestion that is predicted to take until May or June to subside.

U.S. Honey Production



The NASS report issued in March, 2015 stated: “Honey production in 2014 from producers with five or more colonies totaled 178,000,000 pounds, up 19 percent from 2013. There were 2.74 million colonies producing honey in 2014, up 4 percent from 2013. Yield per colony averaged 65.1 pounds, up 15 percent from the 56.6 pounds in 2013.”

The 2014 honey crop included whiter colors and excellent clover honey. South Dakota and North Dakota produced 24,360,000 pounds and 42,140,000 pounds, respectively, and were the 2 largest honey-producing states. Average honey prices ex-beekeeper reached a historic high of \$2.06/lb. Beekeepers indicate that queen breeding has gone very well this spring. The historically high prices for the 2014 crop are clearly motivating America’s beekeepers.

Since during the past 3-4 years some Argentine honey shipments were substantially delayed by 3 and even 4 months, interest in securing North American supplies of honey has become strong during the 4th quarter of 2014 in order to eliminate risks of another round of delayed shipments from Argentina.

Looking back further, U.S. honey production has declined from 220,000,000 pounds in 2000.

2014 U.S. Honey Imports	LBS	KGS	FOB VALUE	LB PRICE
White				
Argentina	11,557,418	5,242,363	20,615,869	1.78
Canada	11,364,238	5,154,738	24,359,495	2.14
India	11,385,244	5,164,266	16,960,571	1.49
Mexico	2,823,823	1,280,866	5,083,049	1.80
Thailand	280,251	127,120	281,800	1.01
Extra Light Amber				
Argentina	57,555,613	26,106,818	106,459,567	1.85
India	23,293,541	10,565,785	33,197,179	1.43
Ukraine	17,371,486	7,879,583	24,244,867	1.40
Thailand	2,536,530	1,150,552	2,833,412	1.12
Organic Honey				
Brazil	24,339,814	11,040,367		
Others	1,248,626	566,368		
Total	25,588,440	11,606,735		
Light Amber				
Americas				
Argentina	11,848,973	5,374,610	23,075,278	1.95
Brazil	10,997,295	4,988,295	19,201,924	1.75
Canada	59,814	27,131	138,261	2.31
Mexico	1,897,554	860,717	3,268,725	1.72
Uruguay	7,045,192	3,195,649	11,392,664	1.62
Asia				
India	8,882,050	4,028,835	12,532,644	1.41
Pakistan	57,785	26,211	82,983	1.44
Taiwan	890,810	404,065	1,023,330	1.15
Thailand	4,802,463	2,178,363	5,679,025	1.18
Vietnam	89,312,035	40,511,306	112,149,403	1.26
Others				
Ukraine	1,940,310	880,111	2,848,979	1.47
Turkey	5,428,407	2,462,287	7,077,103	1.30

Imports 2014

US imports for 2014 were 366,991,453 pounds total from all countries. It appears that consumption is probably over 500,000,000 pounds per year. Please see selected import quantities by country and color which show major exporting countries and price contrasts. For example, prices for white honey range from \$2.14 (Canada) to \$1.49 (India) to \$1.12 (Thailand).

Argentina



The political and economic tensions within Argentina have increased, as have tensions between Argentina and its international creditors. The Argentine economy continues to suffer steep inflation while its competitors in the world economy are experiencing low inflation or deflation. Argentine exports flow primarily to the U.S. and Germany, where the high quality of Argentine honey is valued. Export prices for Argentine honey have risen steadily, from about \$1,300 (2005), to \$2,000 (2008), \$3,000 (2010) to nearly \$4,000 per metric ton in 2014.

Exporters are well aware of the fact that a Point of Inflection may have been reached, but beekeepers are having difficulty adjusting. Some inventories of high priced honey may stagnate in the hands of beekeepers and exporters. A similar situation plagued Argentina's huge soybean industry.

Argentina manifests the general phenomenon that the U.S. has become the preferred destination for international honey exporters. This fact reflects the general geo-political and economic factors, including the strength of the U.S. dollar, cited in the opening of this report. Argentina's exports for its top largest destinations are as shown in the table below.

ARGENTINE EXPORTS		TOP 6 Destinations and Total for period					
		Sep 2013-March2014			Sep 2014-Feb 2015		
Destination		Quantity (Kg)	%	Quantity (Kg)	%	Destination	
1 U.S.A.		19,645,488	69.88	10,116,804	63.20	U.S.A.	
2 Germany		3,009,521	10.71	2,466,794	15.41	Germany	
3 Saudi Arabia		791,695	2.82	1,092,615	6.83	Japan	
4 Canada		772,085	2.75	569,188	3.56	Morocco	
5 Indonesia		658,000	2.34	461,473	2.88	Australia	
6 Switzerland		569,684	2.03	366,800	2.29	Indonesia	
TOTAL		28,112,455.06		16,008,007			

After decades of parity with Europe, the U.S. is now purchasing between 60-70% of Argentina's honey exports. The White and ELA honeys produced in Argentina have very similar flavor profiles to U.S. honey and are produced from similar floral sources. The total 2014/2015 Argentine honey crop is estimated at about 62,000 metric tons (136 million pounds), down from 70,000 metric tons (154 million pounds) in the previous period. The crop is not finished as of the time of writing of this report so there may be adjustments.

Brazil



Brazil remains the major source of certified organic honey, the demand for which has grown. Prices have relaxed a little due to the weakness of the Brazilian real. Exports in 2014 rose 60% over 2013 and reached 25,317 metric tons. In the table below are Brazil's exports for 2 months of 2015 and comparatives.

Brazil	Exports Jan-Feb 2015	Jan-Feb 2014
Total	3,572,977 kgs (7,876,985 lbs.)	
US	2,590,390 kgs.(5,710,773 lbs.)	3,103,876 kgs. (6,842,805 lbs.)

The 2015 crops from southeast, south and northeast Brazil are doing well. The overall colors may be somewhat lighter, with more ELA Organic than is typical.

Brazilian organic honey prices reached peak levels of about \$4,300/metric ton and have now eased to \$3800-3900. A friend mentioned to me that his first sale of organic honey was at \$1,600, which occurred not so many years ago. The current relaxation is healthy, but modest.

Due to the weakness of the Euro, Mexico is also switching attention to the U.S. market, with prices at lower levels than Argentina. However its stronger flavors and darker colors are favored by European buyers.

Vietnam



Over many years Vietnam has greatly and steadily increased its honey production, the number of beehives, the geographic range of honey production and the diversity of floral sources. Similarly the expansion of production of coffee beans and cashew nuts in the past 2 decades has put Vietnam in the top 5 producers and exporters of those products. Vietnam's total honey exports in 2014 are reported by leading exporters to have reached 55,000 metric tons, primarily in the color range of light amber and amber. An increasing percentage of their blends incorporate honey from *Acacia mangium*, a wild forest plant. This floral source is not color stable, and during the last 3 years the U.S. honey industry has become aware of the dilemmas this honey creates. The tendency of *Acacia mangium* to darken steadily, if not rapidly, has been the subject of academic research in Malaysia.

Due to a cold winter and early spring in several honey-producing areas, the 2015 Vietnam honey crop has been delayed. Under these circumstances Vietnamese beekeepers have been struggling to feed their bees and keep them alive waiting for more favorable climatic conditions to allow honey production with proper qualities. Price tendencies are up but still competitive. The problem is the lack of offers and shipment, plus the lack of light amber colors. Some leading exporters have already predicted that the export volumes will decline in 2015 by 35%. How the Vietnamese honey industry will handle production and blending of *Acacia mangium*, which has become a major source of the total crop, is a fundamental question for Vietnam honey as a whole.

To its great credit, the Vietnamese Beekeeping Association has opposed the use of resin technology, which introduces and removes water. The resulting product is not legally "honey" in as defined by most producing

countries. The Nuclear Magnetic Resonance (NMR) technology, newly applied to honey, should be able to detect when honey has been altered by use of resin technology, and there are efforts to expand the data base to be more comprehensive than at present. Since resin technology removes pollen, antibiotics and natural honey components, it is inconsistent with the image of honey as a natural product.

The U.S. Department of Agriculture is aware that 2 decades ago the wine industry applied this technology to American wines and erroneously concluded that the wines were massively adulterated. The false positive, it was scientifically established, was a result of a failure to take into account how the different geological conditions in the soil resulted in substantially different nuclear magnetic resonance profiles.

Emerging honey-exporting countries include Ukraine and Myanmar. We note that Ukraine is in a tense civil war between eastern and western regions. The economic and financial situation in the Ukraine has deteriorated. China and Myanmar, in which China has invested billions of dollars in ports, highways and factories, are experiencing ethnic conflicts which have taken on a military dimension.

Variables Affecting Import Prices

The environment of extraordinarily low to even negative “pay to save” interest rates prevailing in many countries is part of the legacy of the Great Recession. During that period of bubbles bursting, national debts exploded. The national debts in Greece, Spain, and Italy commanded international attention. During the period 2000-2008 the US national debt increased from \$5 to \$10 trillion. From 2008-2014 it further exploded from \$10 to \$18 trillion, the largest cumulative national debt thus far in history. Such global economic realities underlie both the low interest rate environment and the low inflationary/deflationary environments which have provoked low and declining commodity price trends. Those few countries where inflation is raging in contrast to the global trends find themselves increasingly non-competitive in the global marketplace. Points of Inflection are popping up in many industries. Points of Inflection are reached when price adjustments become needed, as happens, to better balance the incentives to produce and consume. The honey industry needs the art of a healthy market and a balance between the incentives to consume and produce.

The Euro has declined from 1 Euro/\$1.60 to 1 Euro/\$1.04 and the Canadian dollar has come down from .90/\$1.00 to 1.25/\$1.00 in recent months.

A few examples of national debt to GDP illustrate why the global macro-economic environment is so tense and why interest rates are so unprecedentedly low for the modern era (how else could nations serve such huge debts?). National debt/GDP ratios for several countries are: Canada, 89; United States, 101.5; Italy, 128.5; Spain, 92.1; Greece, 174.9; Japan, 227.2. This is an illustration of the fact that many countries are living beyond their means and absolutely need a low interest rate environment, less those nations bear overwhelming interest costs were the interest rates to increase.

A quick review of international commodity prices from June-December 2014 shows declining prices for commodities such as soybeans and a steep drop for crude oil, whereas in contrast honey prices from Argentina, Brazil and Vietnam continued to rise. Wholesale honey prices in the U.S. also continued to rise in 2014.

Commodity	Year / Price			
	2008	2010	2012	2014
Soybeans	\$1,600	\$1,350	\$1,400	\$1,000 metric ton
Crude Oil	\$140	\$90	\$97	\$100, \$50 per barrel

Climate Conditions

California and Brazil are suffering from drought while the U.S. northeast had record-breaking snow and cold temperatures in the first months of 2015. In California, the statewide snowpack was 19 percent of the average for March 3, 2015, which is barely above the record low measurement from 1991. The winter of 2014 was the hottest on record for California, and the average temperatures in early 2015 have been hotter than in 2014. Paul J. Wenger, the president of the California Farm Bureau Federation, indicated that diminished water supplies are going to affect everyone in the state. In 2014 at least 400,000 acres went unplanted and farmers reported losses of \$2.2 billion. The cost of buying water has been prohibitive (“Alarm Grows in Withered California,” *New York Times*, March, 2015).

A lack of snow in Alaska caused havoc with the traditional Iditarod sled race and glacier melt in the Himalayan range approaches 15% on their 37,000 glaciers. It is predicted that by mid century the permafrost will become merely 5% of earlier levels which will release enormous quantities of methane gas (25 times more potent heat-trapping gas than carbon dioxide). Such prospects underlie the self-feeding processes of global warming. This year begins with climate scientists and agricultural experts feeling increasing concern about the adequacy, continuity and security of the global food supply.

Honey Testing Conference

At the 2015 Bee Product Industry Conference held in southern China, Peng Guofang, chief scientist of the Chinese Academy of Engineering, declared that a precedent for building a platform for exchanges of testing technology between China and the European Union was being created. Such exchanges are unprecedented in the history of Chinese-European agricultural trade. The goal is to “restore the true nature of bee products as purely natural.” The conference was attended by honey scientists and trade professionals from China, Germany, Japan, Argentina and other countries.

The question of detection of adulteration by sweeteners was the subject of lively debate during the conference. The president of the International Organization of Honey Exporters, Professor Norberto Garcia, cited reports that by some tests 30-50% of the honey in the world marketplace may be adulterated, and scientists from German laboratories stated that up to 80% of honey samples indicate adulteration. Current testing methodologies for honey were questioned by the Chinese honey industry. There were reports that using the Nuclear Magnetic Resonance (NMR) Test some samples considered to be adulterated tested as pure, and some pure samples tested to be adulterated.

Immature Honey

Another topic of concern was the Chinese beekeeping practice of extracting honey that is not ripe, but which has a high moisture content, often 35% or more. The moisture is subsequently reduced in large processing factories. By extracting “honey” so quickly and with such high moisture content, two things happen: 1) The quality of the honey is jeopardized and 2) the quantity of honey produced can be doubled and tripled. In most honey-consuming countries the bees must reduce the moisture of this product of nature, not vacuum chambers or other techniques in factories. The issue of mature vs. immature honey is becoming a serious matter of contention. According to honey scientists, the chemical profiles of immature honey extracted by beekeepers mimic chemical profiles of the nectars from which that honey was produced while substantially differing from chemical profiles of mature honey. All “honey” to which water has been added or from which water has been reduced by mechanical rather than natural means (bees), is regarded as “adulterated” by many international standards of honey. This is a crucial consideration for how the international honey industry treats “immature honey.” The debate has not concluded.

A new technology for detecting adulterants in honey by syrups derived from rice, beet, wheat, corn and other foods was presented at the conference by the director of a major analytical laboratory in China. Concerns about food safety in the Chinese domestic and export markets are motivating new and ongoing analytical studies in China.

The need for continuing study and deeper understanding of honey’s chemistry through dialogue was furthered at the conference.

Honey Science

The chemical profiles of honey depend upon multiple variables which include nectar sources, climate, elevation, season, soil, fertilization and processing. This is due to the complex bio-chemical photosynthetic and metabolic processes involved in the interaction of botanical and zoological life forms. We need to understand those variables and their impact upon chemical profiles of honey. Academic, government and private laboratories in various countries do not currently possess an adequate and comprehensive data base of primary authenticated samples.

When the first carbon isotope study using U.S. honey samples was conducted, Dr. Jonathan White was surprised at the diversity of isotope ratios found. As Dr. Joseph Bowden, the official referee lab director for the U.S. Department of Agriculture, pointed out, the analysis of a second year’s samples revealed sharp contrasts with the first year; these divergences were correlated with changes in aridity and rainfall, which quite naturally could influence the photosynthetic processes by which various carbon isotopes in the atmosphere are fixed by botanical life forms, including those which create honey and honeydew honey from the interactions of botanical and zoological life forms. It is important to understand the range of variables which affect the chemical profiles of honey since no floral source within any country has an immutable chemical profile that is not influenced by other variables.

The situation is also compounded by the facts that 1) bees may be pollinating multiple floral sources and 2) exporters are often blending honey together from diverse floral sources, regions, elevations, seasons and soils. Nature often defies our quest for simplicity, but that defiance is concurrently the foundation for the charming diversity of colors and flavors characterizing the world’s honey.

Circumvention

In January it was reported that honey labelled as “Latvian” was seized and destroyed in Houston by U.S. Customs. Also in early 2015 honey imported in Europe from Belgium was found to be fraudulently identified and was alleged to be Chinese. The problem of fraudulent documents of country of origin, bills of lading and quality inspection is continuing worldwide.

In 2015 the U.S. government issued a formal and strong petition to the World Trade Organization to solicit international cooperation to address the evasion of paying anti-dumping duties through such acts of fraud as transshipment, fraudulent documentation, fraudulent customs entries, etc. The fact that this issue of circumvention rose to such a high level manifests the depth of concern with the problem in the U.S.

Food traceability and food safety are being addressed as important consumer concerns in countries around the world, including China. Smartphones are being used to scan product codes in supermarkets, allowing consumers to identify country and local region of production of food products before making purchase decisions (China’s Long Food Chain Plugs In, March 2, 2015, *New York Times*).

Resin technology introduces and removes water from honey in ways which remove pollen, antibiotics and honey constituents whose removal may change honey from ELA to White, LA to ELA. This technology can serve as a means of facilitating circumvention by disguising country of origin, reducing risks of contamination of illegal levels of antibiotics, and increasing prices by lightening the color of honey. According to the manufacturers, this technology has been sold to a number of countries and may be widely used in several Asian countries.

An annual growth of global honey production by 35,000 metric tons in the past decade has been reported. These increases have occurred while reductions in the numbers of beehives and the yields per beehive have also been reported in many producing countries with traditional and experienced beekeepers. Prices for fully traceable honey with high quality have attained historic highs, as have the gaps between high and low quality honey. Correlations between the import of cheap and suspect honey with the blending and re-export or straight re-export as local honey have been made. The aberrations in production and export patterns have kept alive concerns with continuing schemes of circumvention and/or adulteration of honey. To quote Professor Garcia: “The temptation to import honey and re-export it as locally produced may also have increased.”

Honey and the Law

As mentioned earlier, the class action suit of the American beekeepers is still alive and possibly nearing a substantial settlement. The suit followed the Deferred Prosecution Agreement for Groeb Farms and Honey Holding and was directly against all those parties who colluded to circumvent Chinese honey through numerous third countries. That this suit is nearing settlement indicates that the phenomenon of collusion to circumvent and gain unfair competitive advantage through a two-tiered market was real and devastating to those who conducted their businesses legally and without deception.

Beekeepers also report that the bankruptcy court for the Groeb Farms bankruptcy filing initiated the “claw back” provision of bankruptcy law. Any payments made by the debtor 90 days prior to the bankruptcy filing must be returned to the bankruptcy court and used to pay secured creditors. The extent to which this will affect beekeepers, importers and exporters is unknown, but potentially is very serious in its financial impact as the Groeb bankruptcy involved the largest food fraud in U.S. history and was likely the largest bankruptcy in the U.S. honey industry.

“Flavor of the Year”

Efforts are being initiated within the National Honey Board to most effectively utilize the opportunities created by the “Flavor of the Year” award given to honey by the prestigious European flavor marketing organization, Firmenich. Honey’s natural diversity of flavors (and colors) is directly linked to the diversity of floral sources, which are associated with the beauty of production of honey.

The health benefits of honey are being further articulated including their relevance to the reduction of diabetic spikes.

The worldwide honey industry cannot ignore the major realities that if marketing efforts are successful, we face a future in which international demand may well exceed international supply. As national cultures become more globalized, the interest in consumption of products from different countries and geographic regions will grow. But we want and need the product to be sold and promoted in ways consistent with the beauty of this historic product of nature. The production and consumption of honey is acquiring an increasing international flavor. That portends well for U.S. honey exports in coming decades.

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