



INTERNATIONAL HONEY MARKET

by **RON PHIPPS**

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Introduction

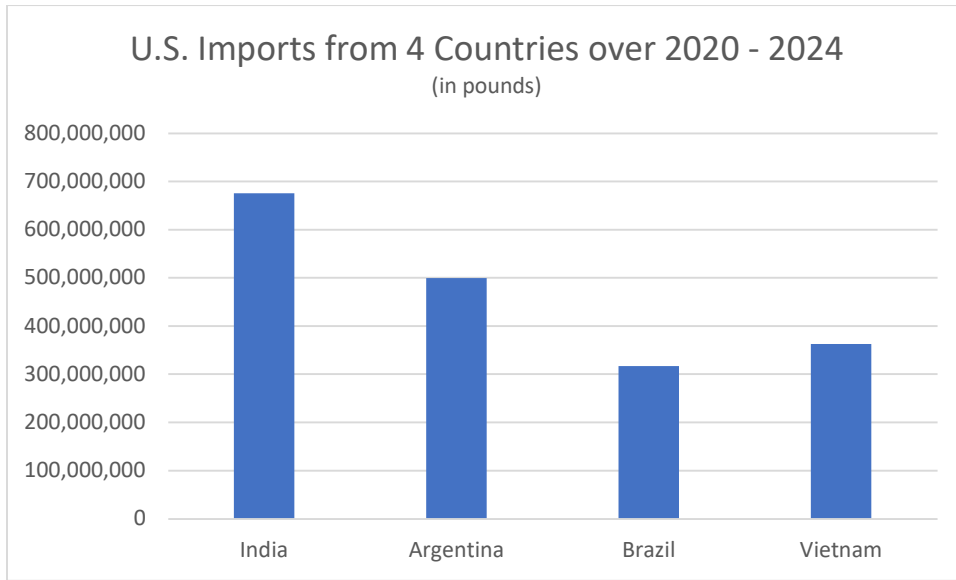
In the classic and daring film about the television industry, *Network* (1976), the journalist shouts one of the most famous and acclaimed lines in any movie: “I am mad as hell and I am not going to take it anymore!” In the film, windows fly open and a chorus of viewers in unison shout out those famous lines. The world’s beekeepers are as mad as hell and they are not going to take the international flood of manipulated, adulterated and dumped pseudo honey anymore!

The cartels in their cleverness have created illicit fortunes, devastated and bankrupted beekeepers, jeopardized food security, food authenticity and ecological sustainability throughout the world.

A Sea Change is emerging, manifested by reports of honey packers selling or seeking to sell their companies and suspicions of importers illegally manipulating their corporations. Many who have put on white robes and mounted white stallions have dismounted and changed their garb to become anonymous. The U.S. honey industry is asking, why? There are two fundamental answers: 1) the threats of substantially, if not dramatically, increased antidumping duties on India, coming from the Department of Commerce’s Administrative Review, 2) threats of retroactive duties on imports from Vietnam, and the impending “reciprocal tariffs.” Considering the magnitude of honey import volumes and the decreasing prices, there is a potentially devastating increase in duties owed from imports over the past years. Honey from Argentina, India, Brazil and Vietnam is subject to U.S. antidumping duties and the volumes over the past 4 years are large as Chart 1 shows. There is great enthusiasm that has been expressed by political leaders for raising revenue in the United States using tariffs.

Imports from countries under antidumping orders during the past 4 years constituted an astonishing 79% of all U.S. imports of honey during that period.

Chart 1. Total imports from Argentina, Brazil, India and Vietnam 2020-2023



There is concurrently a converging collapse in the market for both Authentic Honey and Pollination Services. The challenge for beekeepers is compounded by increased stress upon declining Bee Populations around the world. Alarms were sounded in early 2025 by beekeepers in the U.S. and France about devastating bee losses. U.S. honey producers sent out crisis alerts regarding alarming bee losses of over 50%, with financial losses estimated at \$159,000,000, due to colony collapse disorder and mite infestations. Over 1.1 million bee colonies were lost, according to a nationwide survey of beekeepers across the country. Samples of materials from hives were analyzed at The Bee Research Laboratory of USDA-ARS, Beltsville, Maryland, and results will be made available. Canadian beekeepers report significant bee losses and inability to import bees from the U.S. Studies of wild butterfly populations over the past 20 years indicated a population loss of 22% according to a study by the State University of New York, Binghamton. There is a general problem facing all pollinators.

Another factor is the increasing and deepening exposure of adulteration of honey through Multiple Modern Modes of Adulteration. New testing laboratories with academic scientists, including several in the U.S., are adding new tools to the toolbox for detection of adulterants. The magnitude of adulteration of honey is greater than revealed previously, according to government and academic scientists. German laboratories have recently indicated in public and private talks that the findings of adulteration with bioengineered sweeteners of Indian honey samples are up to 80-90%. Indian exporters have themselves confessed that 100% of Indian honey is extracted immaturely and reduced artificially. This means that 100% of Indian honey in the world market is adulterated by Codex and Apimondia standards. Chinese honey authorities have confessed 95% of Chinese honey is immature. They have pointed out that they call what they sell “water honey.” Vietnamese honey exporters have said that they could produce mature, ripened honey, but if they did so, they could not produce the vast quantities nor sell at the low

prices demanded by American packers and importers who dismiss economically motivated adulteration. The use of resin technology, the blending of bioengineered sweeteners to elude specific tests, is well known. Indeed, the Chinese website Alibaba has repeatedly shown that sellers of bioengineered sweeteners claim to be able to evade detection of adulteration by US FDA and US Customs government authorities. This is really brazen!

The prestigious *Times of India* published an article on March 10, 2025, "Beekeepers protest over unfair pricing of honey and adulteration concerns." "Thousands of beekeepers gathered in front of honey-selling factories across Punjab, Uttarakhand, Rajasthan, and Uttar Pradesh on Monday, demanding fair prices." "The beekeepers marched to these factories in the morning and staged a day-long dharna...with additional demonstrations at the offices and factories of three honey-selling companies in Rajpura, Punjab." "All the beekeepers are suffering losses as companies have refused to purchase honey," said a beekeeper from Himachal. "The beekeepers alleged that companies were not buying their original mustard honey because they were involved in rampant sugar syrup adulteration...by mixing 80% syrup in 20% honey. The sugar or corn syrup costs Rs 50-60 per kg, whereas mustard honey costs above Rs 100 per kg...These companies are even exporting adulterated honey.." "The protesting beekeepers also demanded advanced lab testing, as Nuclear Magnetic Resonance.. 70% to 80% of the honey sold in India's domestic market is adulterated with syrup...'In our religion, honey is considered sacred, but this adulteration is corrupting our traditions too. These companies have turned honey into a sweet poison, exploiting both Indian consumers and beekeepers'" according to the leader of the Bee Farmers' Welfare Society (MKBWS).

Use of new DNA technology has revealed aberrations in retail honey that resulted in significant recalls from retail shelves that have been reported in the European media. The sea change in the understanding of Multiple Modern Modes of Adulteration and new testing developments for adulteration is seeping throughout testing laboratories, many of which dominate the testing of honey samples for honey entering the large North American market and the European market.

There is a classic story of accountants being interviewed for a position in a big firm. They are asked question by the interviewer, which they answer correctly. Another candidate is asked a simple accounting question, and he answers "whatever you want it to be." The latter gets the job. Concerns have been expressed that some packers and importers are no longer seeking the truth of honey authenticity but instead making efforts to ostracize the truth tellers reporting detection of adulteration. Legal liabilities for the testing laboratories are coming into play. Those liabilities may be highly punitive and severe in the European judicial system.

There is now ample intelligence, data and a number of witnesses to guide a skillful and incisive use of the right testing methodologies and the right parameters to allow us to determine what is authentic honey and what is fraudulent.

Honey Prices in the U.S.; US Production Quantities Down, Productivity Down

Unsold inventories of honey produced in the U.S. are accumulating in the U.S. as of February, 2025. The *National Honey Report* cited prices paid to American beekeepers in the range of \$1.85-2.30/lb. for January, 2025. Beekeepers are feeling that prices offered have fallen below the cost of production.

The U.S. market must rise based upon 1) the work on the second antidumping review which beekeepers believe will increase tariffs, 2) the growing attacks against honey adulteration, and 3) Climate Disasters including a global drought which creates increasing wildfires and reduces productivity per hive. The drought has insidious consequences on human, botanical and zoological life forms.

“In 2024 United States honey production in 2024 totaled 134 million pounds, down 4 percent from 2023. There were 2.60 million colonies producing honey in 2024, up 3 percent from 2023. Yield per colony averaged 51.7 pounds, down 6 percent from 2023” according to the National Agricultural Statistics Service (NASS) 2025 report. U.S. honey yield per colony was stable at 47 lbs./colony in 2021 and 2022, and increased to 55 lbs./colony in 2023. In 2023 honey prices paid to beekeepers declined 16% to \$2.52/lb. compared to \$3.01/lb. in 2022. Average prices increased about 5% in 2024 according to the NASS report.

Chart 2. US Honey Imports in Pounds 2023-2024

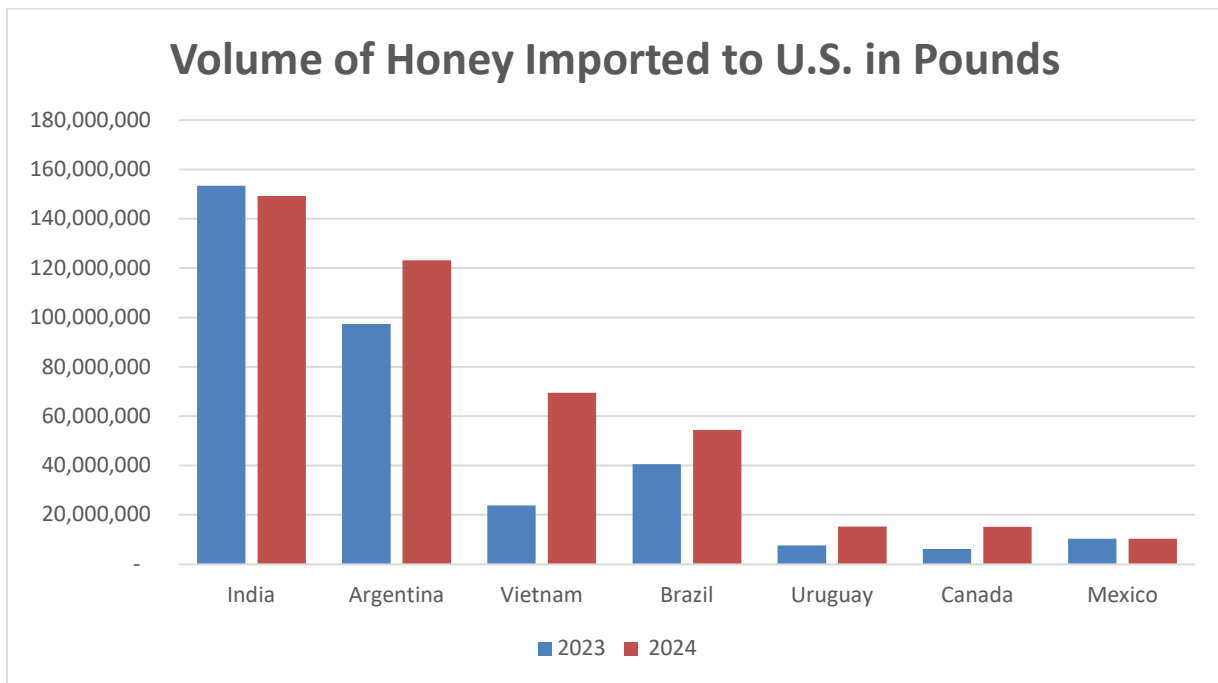
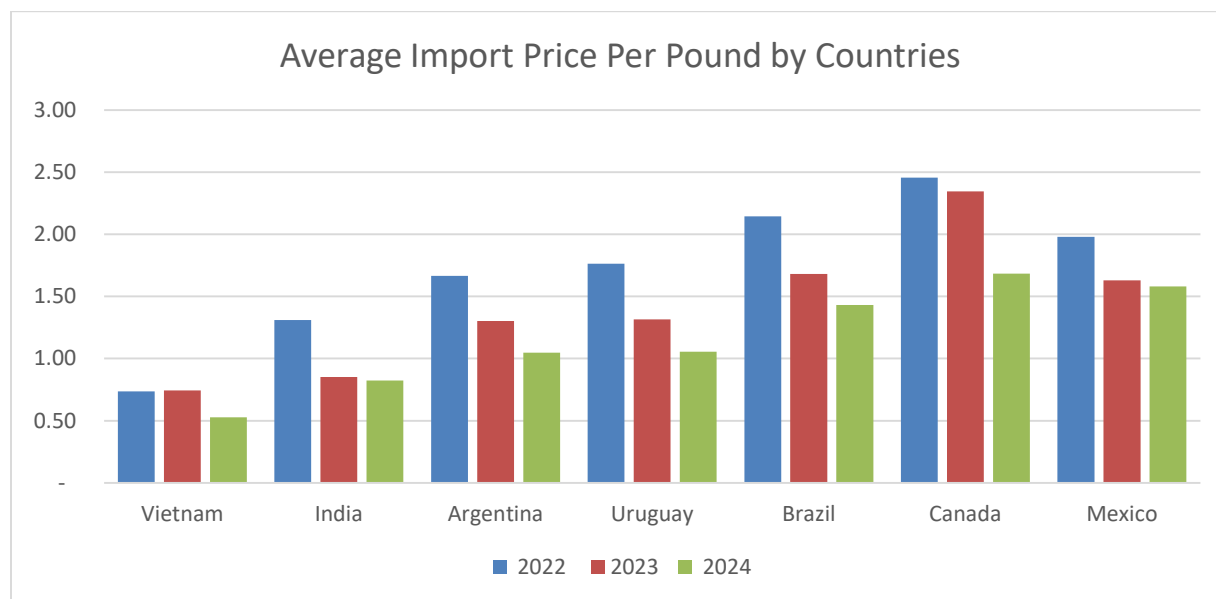


Chart 3. US Honey Average Import Prices (FOB) per Pound by Country



Data Source: U.S. Bureau of Census, National Honey Report

In 2024, average prices from countries subject to antidumping orders included \$0.52/lb. from Vietnam and \$0.77/lb. from India. India's exports include extra light amber, white and organic honey, making those price levels even more startling and irrational. These are indeed extraordinarily low values. Importers were paying antidumping duties of about 6% on Indian and 60% on Vietnam honey. Prices for most imported honey declined significantly beginning in 2022, despite risks of higher antidumping duties being imposed retroactively. In these low prices and low anti-dumping rates resides enormous vulnerability for gigantic retroactive antidumping duty liabilities.

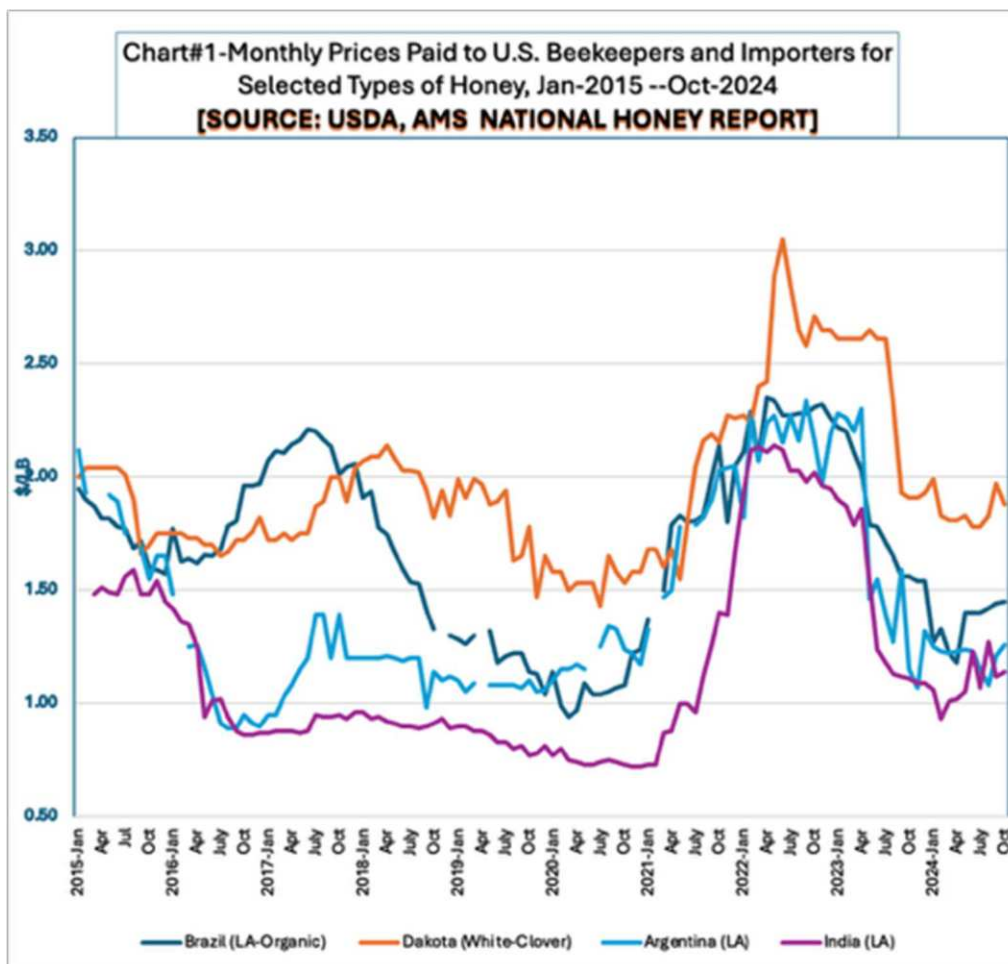
With the new U.S. administration, there is talk of increased tariffs on many products, including those from Mexico, Canada and China. There is also an introduction of the concept of reciprocal tariffs, meaning that for any given product, if that product is subject to an import tariff by a foreign government, then the amount of the tariff will be matched on exports of that product by that country exporting to the U.S. For example, in the case of China and India, there are huge tariffs on American honey, with India at 65%. Leaders of the American Honey Producers Association have stated that they are actively engaged on the tariff issues with the Trump administration. That engagement is occurring on many levels.

The change in the U.S. government following the 2024 election has brought people who have direct experience of the honey industry into very strong leadership positions. Senator John Thune of South Dakota, who is now the Majority Leader of the U.S. Senate, worked for beekeepers during his summer breaks in his college years. Secretary of Homeland Security Kristi Noem was the governor of South Dakota, the premier producer of authentic clover honey in America. It makes a big difference when people directly understand activities that they

govern. Senator Thune is currently co-sponsoring a bill that would support the effectiveness and timeliness of the USDA response for agriculture after extreme weather events, including drought and floods.

The collapse of world honey prices is a profound anomaly. A main factor in the political movement towards the right in the U.S. 2024 election was food inflation. Lower production generally leads to higher prices. The global food supply is in a state of great vulnerability so we should be seeing higher honey prices, not reductions. Climate disasters, including fires and floods, resulted in higher costs of production and prices to consumers. Prices for coffee beans skyrocketed in recent months. Within this context of food inflation, how is it that prices for imported honey continued to decline? And beekeepers' inventory of authentic honey increased? There is a reason and that reason is rooted in the systemic adulteration of honey which creates a situation of "no ceilings to quantities and no floors to prices."

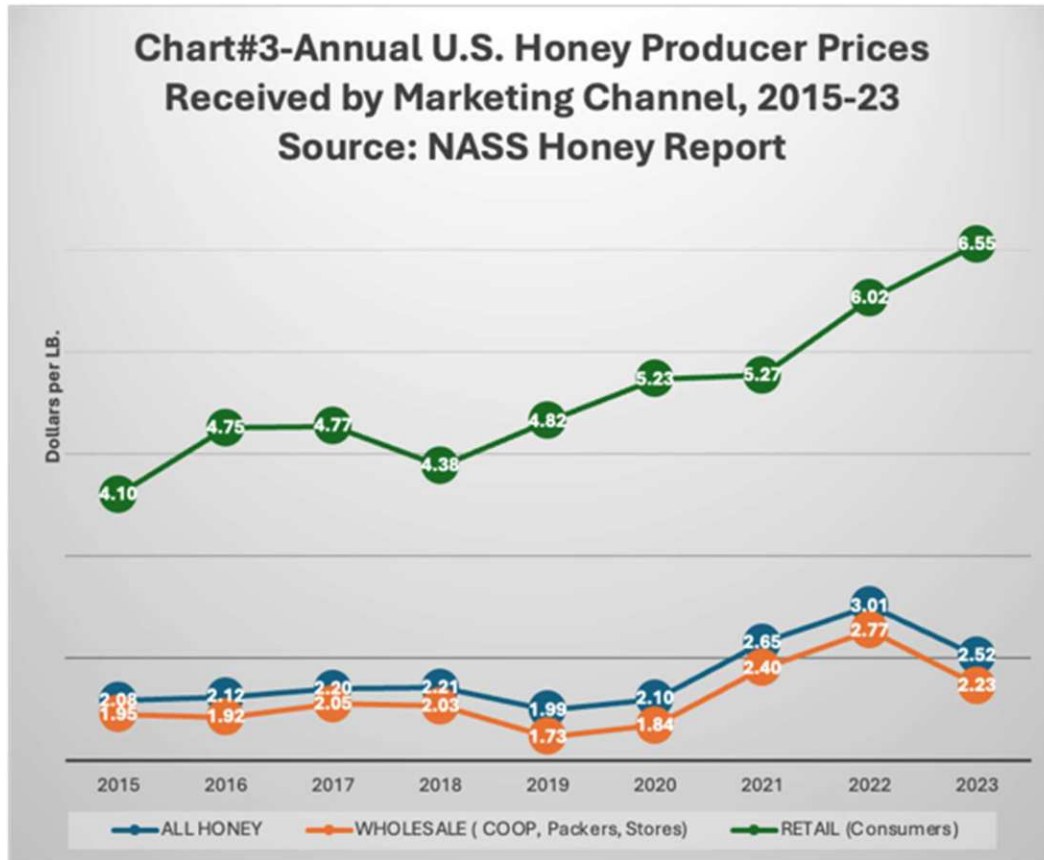
Chart 4. Monthly Prices Paid to Beekeepers and Importers 2015-2024



Prepared by Dr. Stan Daberkow, Economist Emeritus, USDA

Both U.S. (Dakota White) and imported honey prices moved in tandem with prices declining from 2015 to 2020. The antidumping order in 2021 resulted in transient price increases in 2022, followed by declines through 2024. Prices from India and Vietnam were consistently the lowest.

Chart 5. U.S. Honey Retail and Wholesale prices



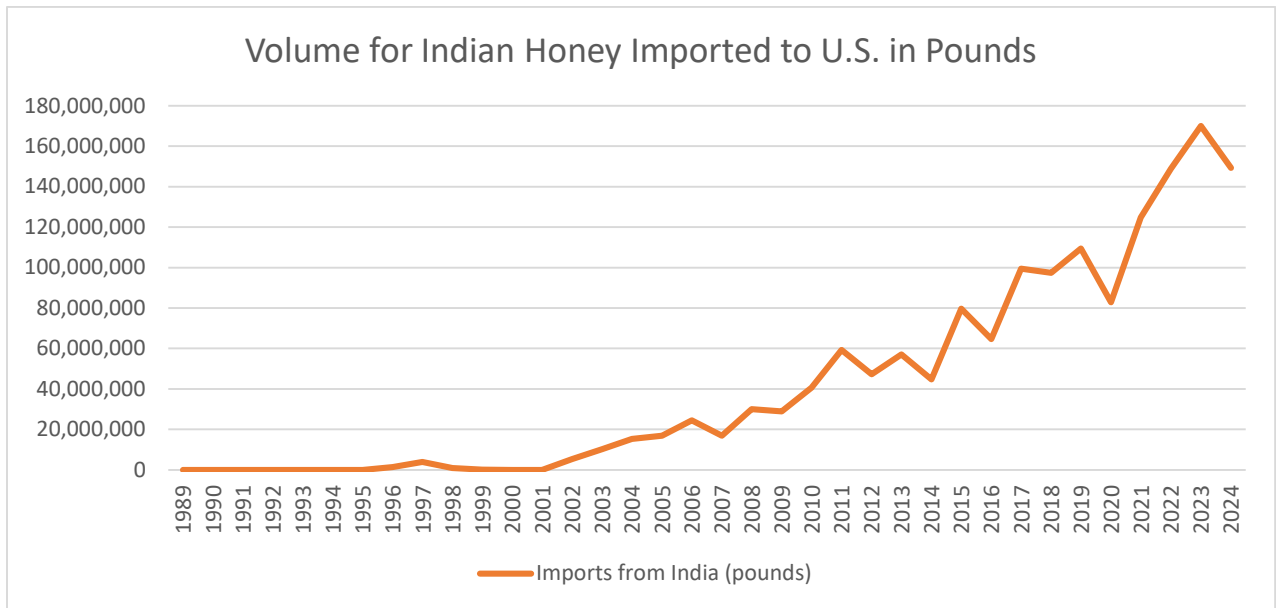
Prepared by Dr. Stan Daberkow, Economist Emeritus, USDA

Average retail honey prices to consumers began in 2015 at an average of \$4.10/lb. and marched mainly upwards to reach \$6.55/lb. in 2023. Wholesale prices, however, began at \$1.95/lb., drifted down and only reached a high of \$2.77/lb. during the Covid pandemic in 2022. Dr. Daberkow has previously shown how retail honey prices rose while the prices of honey paid for raw honey inputs plunged or stagnated, creating a huge profit gap and leaving beekeepers holding the empty bag. Since that chart was published, some of the data used in that report became unavailable.

Imports of honey packaged for retail sale in 2024 reached a total value of about \$67,000,000, with India (\$11,000,000), New Zealand (\$20,000,000) and Turkey (\$8,000,000) the top exporters. India was the largest exporter in this category by volume at 10,800,000 lbs. Retail packed honey is not subject to antidumping duties as it is outside the scope of the order. Some have recognized this omission as an error. The total volume in 2024 exceeded the previous 3 years.

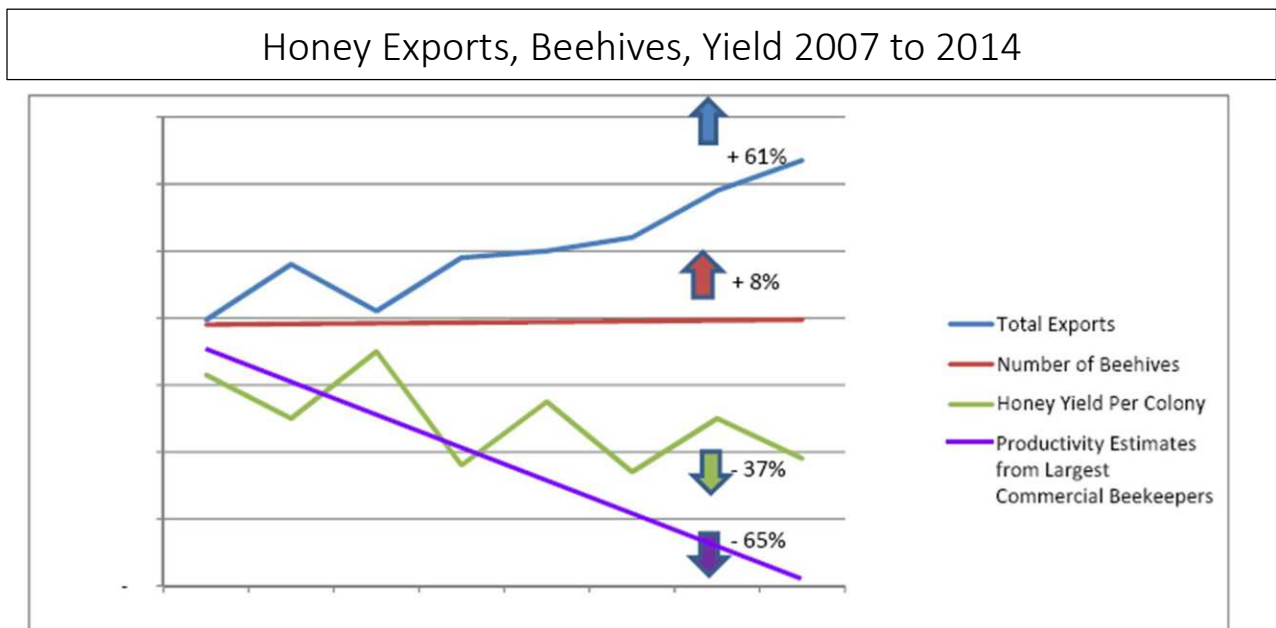
An intrepid observer shared anecdotal evidence for consumer prices at one major national retailer which fell during 2023-2024 for honey bottles (-20%) and bears (-16%).

Chart 6. U.S. Imports of Raw Indian Honey in Pounds



The chart below, which contrasts the dramatically rising world exports volumes of honey, the stable number of beehives and the sharply declining productivity per hive, has been widely cited. It is a reminder of the worldwide contradiction in rising honey export volumes in the face of stagnant numbers of beehives and declining colony productivity. Given this contradiction, and the current tendency towards inflation, prices for honey should rise independent of tariffs.

Chart 7. Honey Exports, Beehives, Yield



What has suppressed the rise in honey prices, is the cynical prevalence of systemic adulteration of honey.

Havoc of U.S. Tariff Rates in Flux

Daily changes in tariff threats and implementation characterized early March of 2025. Blanket tariffs of 25% were threatened on Mexico and Canada, and President Trump declared his “love” for tariffs. Reciprocal tariffs were announced to begin April 2, 2025. How these tariffs would affect major exporting countries of honey is unclear, except that Mexican and Canadian exporters could be subject to the announced 25% rate beginning in April. Additional dramatically higher tariffs could be assessed if the threat of “reciprocal” tariffs is implemented. India collects a 65% duty on Indian imports of honey from the U.S., for example.

The American Honey Producers Association is actively engaged on the tariff issues with the Trump administration, along with vital issues of bee health.

The long and surprisingly delayed determination of final antidumping rates for the First Period of Review in the honey antidumping case is scheduled to come to its end. There is both a threat of sharp increases and the possibility of a decrease. Regarding the Antidumping Order on honey from 4 countries, which was initiated in April 2021, it is anticipated that the Final Determination of honey antidumping rates for Argentina, Brazil, India and Vietnam for the first period of review will be issued April 14, 2025, by the new Republican administration. The period of review began in November 23, 2021 and ended May 31, 2023. Two companies in India, Allied and Indocan, were mandatory respondents for individual examination. Cash deposit rates for Vietnam are about 60%, for India only 6%, for Argentina 9-49% depending on the individual exporters, for Brazil about 10%. If the Final Determination rate is higher than the cash deposit rate, then there will be additional charges. Several Vietnamese exporters were assessed rates in excess of 100% in July, 2024, so there could be significant additional duties. If the Final Determination rate is lower, then funds could be returned to the importers who pay the duties. The abysmally low prices of honey from India (about \$0.77/lb. in 2024) indicate that the Final duty rate in contrast could be dramatically increased from the low rate of 0.59% assessed in July, 2024. It is widely believed that geopolitical considerations under the previous administration led to irrationally low antidumping rates for India in the initial DOC determination. In addition, the failure to do the intrusive field investigation that the law requires (and was done for Argentina) allowed for political manipulation.

From the macroeconomic perspective, the phenomena of transshipment, false country of origin, and false quality inspection certificates remain active. Threats of new tariffs and antidumping orders being implemented may result in transshipments re-emerging as a way to avoid duties. Transshipment is illegal, and as reported from Europe, is being prosecuted as the fraud it is.

Exports from companies in foreign countries of honey, cars, steel, aluminum, solar panels, etc. which are owned by Chinese entities may be subject to the China tariffs rates which were announced by the Trump administration, not the tariffs for the third country which exported the goods. For example if country X hosts a Chinese factory, those products will be subject to China’s tariff, not the tariff for country X. This is specifically a way to prevent transshipment of

products subject to high Chinese duty rates. As China aggressively purchases strategic resources throughout the globe, this mode of customs fraud could resume.

Comments on International Markets

Argentina reports their current 2025 crop is above average, but not a bumper crop. Best of all, Argentina's bees are healthy, in contrast to bees in North America. The weather was volatile, and extreme heat and torrential rains followed by flooding and runoff left their mark. Yields rose for some beekeepers, and "the increase in the area devoted to sunflower cultivation was very important, and this had a significant impact on the final harvest volume" (Espacio Apicola newsletter).

Other countries have tried to use Chinese resin technology to give the appearance of organic honey by removing antibiotics, residues and other contaminants. But in the U.S., the use of resin technology is illegal for any products sold as honey.

Brazil is the epicenter of the export of organic honey and has a unique position. In the past 3 years, the price of Brazil's organic precipitously declined. Currently, demand for Brazilian organic has increased and prices are rising in the first months of 2025. The demand for authentic organic honey with low glyphosate levels is great and prices have risen.

Due to the omnipresence of glyphosate it is very difficult to find organic honey free of it, since it migrates through atmospheric and water systems. Northeast Brazil is the major producer with low levels. Imports of Brazilian Organic honey reached 50 million pounds in 2024, having increased during the past 3 years.

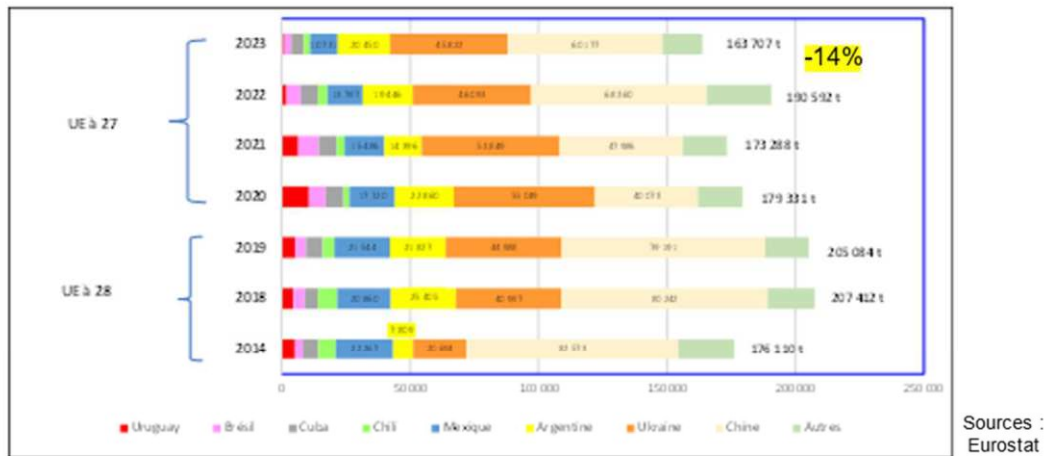
Beekeepers in Nicaragua have reported declines in honey prices, although production was down, and the declines occurred after Indian investors bought control of a honey trading company.

Reports from Europe indicate in general that after the invasion of Ukraine, there was an explosion in prices for energy and food. However, after peaking during the Covid years, sales of honey in Europe declined by 17% in volume in 2024. The French beekeepers report that at the end of 2023, stocks in the hands of beekeepers were up 17%. Total imports into the EU from third countries declined 14% in 2023, with low priced sources China and Ukraine providing the majority of the volume of honey imports. The reports of adulterated samples in Europe have increased concerns about adulterated honey, and investigations conducted by the Joint Research Center have provided substantial evidence.

Chart 8. Origin of honey imports of the European Union 2023

Origine des importations de l'UE – 2023

Nette correction des tonnages importés en 2023 : baisse de 14%
CN, UA, AR stables et MX BR CU en baisse et surtout «autres»



- 2 pays (Chine, Ukraine) = 65% du total
- 4 pays (Chine, Ukraine, Mexique, Argentine) = 84% du total

This graph, provided by the French SPMF, is beautiful, with colors worthy of the great French impressionist painters. The packaging and marketing of retail honey in France is stunning in its appeal to the diversity, origin and beauty of this product of nature.

It is important to note that Ukraine was originally part of the American beekeepers' antidumping petition. But because of Russia's invasion of Ukraine, Ukraine was removed as a subject of the investigation. Ukraine's exports to the European Union ironically increased despite so many men, including beekeepers, being engaged in the resistance. Honey from China and Ukraine dominate the honey volumes imported into the EU. China and Ukraine have had commercial relationships, including substantial investments from China in many segments of the Ukraine economy.

Honey Adulteration Reports in the Media

As reported in the introduction, the Times of India published an article about the protest of Indian beekeepers (<https://timesofindia.indiatimes.com/city/chandigarh/beekeepers-protest-over-unfair-pricing-of-honey-and-adulteration-concerns/articleshow/118856088.cms>).

In February, 2025, a news report on honey sold in the United Kingdom was released titled: “Over 90% of Honey Samples from UK Retailers Fail Authenticity Check.” All samples from UK beekeepers were genuine, but 24 out of 25 samples from retailers were flagged as suspicious of dilution with cheap sweeteners. <https://randoxfood.com/over-90-of-honey-samples-from-uk-retailers-fail-authenticity-check/>

In January 2025, 20 samples of honey on Latvian supermarket shelves were tested by an Estonian laboratory using DNA analysis of components and only 6 samples met the standard of authentic honey. Furthermore, the honey was labelled origin Latvia, but is suspected of being primarily from China.

Cambodian authorities detained a Vietnamese woman for falsification of the origin of imported honey in February 15, 2025. The company Chan Honey was raided and the counterfeit honey was seized. The U.S. imported over 1,500,000 kilos (3,070,000 lbs.) of Amber honey from Cambodia in 2024, according to the *National Honey Report*.

Adulterated honey from Turkey was reported to be produced in 43 facilities, and adulterated products are found on supermarket shelves throughout Europe. The U.S. is the largest importer of Turkish honey, according to an article released by *Deutsche Welle* in February, 2025. Imports of Turkish honey to the U.S. in 2024 were over 3 million pounds according to U.S. government data.

From recent reports it is clear that authorities in many countries are collaborating and taking honey fraud seriously. Information has accumulated about the players, the conspiracies and the methodologies used. The adulteration of food products has reached so far that international aid projects to increase the nutritional content of foods for developing countries have found adulteration of vitamins and nutrients essential for increasing the nutritional value of these foods. The consequences of food fraud are wider than many of us have realized.

Honey Adulteration Testing Developments

Scientists have found that Indian honey samples with beet sugar pass the old adulteration tests run by major private laboratories. In July, 2024, testing for Indian Beet Syrup by LC-HRMS became available and 80% of samples were failing to pass. As we have written previously, the invention of new bio-engineered sweeteners seems to advance faster than the ability of testing methodologies to detect the adulteration. Shopping for laboratories that pass samples is unfortunately a concern.

Several samples of Indian honey were analyzed in 2025 and all were judged “suspicious” according to a major laboratory. Signs of foreign sugars were detected. Statements have been made in past years that 100% of Indian honey samples have been judged adulterated. Some parameters which are important markers of adulteration were not analyzed, nor were all the models and modes of adulteration exported by China and utilized by “Eastern Nations” investigated.

For the past 5 decades the testing for authenticity of honey has been dominated by the mythology of the “magic bullet,” the magic number, the single parameter; this is manifested in the search for

the carbon isotope ratio that would distinguish honey from other sweeteners serving as adulterants. The failure of this approach is evident. It has its parallel in the mythology of the single mode of adulteration, which ignores the multiple modes which have developed in Asia, with China as the principal epicenter of the creation, export and promulgation of these modes. The detection of economically motivated adulteration (EMA) involves considering the absence of essential ingredients that come from the completed interaction of bees with nectar. I vividly recall how Dr. Gudrun Beckh told me how the 38 Nuclear Magnetic Resonance parameters show that immature honey profiles mirror those of nectar. The use of resin technology creates the absence of certain essential components of natural honey.

The classic Codex definition of honey states that honey is the product of the completed interaction of bees and plants. While some are seeking to weaken that definition, the reality of evolving MMMA requires us to strengthen that definition. That strengthening should also include precluding both: a) illicit modes of production; and b) all known modes of adulteration. The definition also should incorporate an evolving knowledge of the multiple variables which give rise to the diversity of chemical profiles and the multiple tools within the toolbox for detecting adulteration and confirming authenticity. Causative variables are crucial.

This pressure for new honey “standards,” occurs at this time when Chinese authorities have taken the Presidency of the International Standards Organization (ISO). The honey standards that the Chinese propose and push would allow the continuation, if not the increase, of production and marketing of adulterated honey. Self serving standards that hide rather than expose MMMA would be devastating.

There have been discussions among major agricultural organizations to establish pilot programs which will promote the production of authentic honey by the utilization of those modes of production and processing that lead to authentic honey, in contrast to the processes that facilitate economically motivated adulteration which benefit small cartels but harm the majority of producers of honey.

The world’s supply of authentic honey exhibits an extraordinary and charming diversity of its physical and chemical attributes, flavors, aromas, and benefits, much as do wines, coffees and teas. What is necessary for objective and incisive separation of authenticity from fake honey is an analysis that takes into account the multiple variables which give rise to that diversity. Without knowing and considering the multiplicity of factors, including the modes of production, it is impossible to have a scientifically tenable distinction between authentic and fake honey. But modern computerization allows the creation of such a data base within a vast array of profiles easily available by AI.

In February of 2024, we were privileged to have extensive discussions with the Joint Research Center in Belgium. Concerns about honey adulteration are being pursued with a sense of responsibility towards the beekeepers and agriculture in general. These discussions are leading to a sea change in the approach for analysis of authenticity. The scientifically advanced JRC is confirming that these causative variables must be considered and specified in creating genuine profiles and guidance for what to look for. There are multiple techniques, analytic tools, and assessment and recording of these variables. It is now less a matter of tools and more a matter of

understanding the variables that give rise to the diversity of authentic honey. We note that that diversity includes honeys that are not palatable for human consumption. One of the modes of adulteration (resin technology) illegally removes features chemical components that render some honeys unpalatable.

A year ago from this writing, we met with the Syndicat Producteurs de Miel de France in Bordeaux at the invitation of its President Joël Schiro. Joël is a hero for recognizing and exposing the systemic fraud that has been created, perpetrated and exported by the Chinese honey industry. When confronted with complaints about the problems of beekeepers in France, Chinese exporters described how they could “produce large quantities of honey, sell them at low prices and still make huge profits.” By beekeeper’s standards, these practices are improper and the pseudo “honey” does not meet Codex standards.

We can see from the meetings we had last year with the European Commission and the prestigious Joint Research Center that progress in fighting and eliminating adulteration of honey is proceeding at an accelerated rate throughout the western world.

The poignant and powerful recent protests of the Indian beekeepers cited earlier against the systemic adulteration of honey illustrates that it is neither beekeepers in producing countries nor consumers seeking authentic honey who benefit, but only a small cartel of criminals who organize and conduct that systemic adulteration, imposing horrendous consequences for the people.

Agriculture, Honey and Ecology

2024 was the hottest year recorded in the history of the planet. January, 2025, was the hottest January of all the centuries recorded. Rod Scarlett, Executive Director of the Canadian Honey Council wrote in the *Alberta Bee News* that honey production was down in 2024, and “..it is becoming more apparent that weather-related problems compound the issue. Rain, wind, smoke and excessive heat all played a part in the reduced honey production this year.” An expert on the honey market from Canada reported that “when we were younger in days we never used to have such massive temperature swings as occur now.” In Nicaragua, honey production is half to two-thirds of a normal year due to weather conditions.

Agriculture scientists and strategic planners throughout the globe are concerned about the impact of weather extremes on both production and productivity. Insurance providers are reviewing their risks and the policies that they offer.

The chemical and physical processes which underlie the accumulation of heat trapping gases are self-feeding processes. The effect of these processes is to create more frequent, severe, intense and volatile (unpredictable) climate disasters. The alternation between droughts, floods, heat waves and arctic vortexes, the melting of glaciers and the permafrost lead to deterioration of the moisture content in arable lands and decline of nutrients. That leads to decline in productivity in agricultural yields, including honey. A study from the Pennsylvania State College of Agricultural Sciences reported in 2024 that “climate became increasingly tied to honey yields in the data after 1992.” The data was collected from all 50 U.S. states.

Fires in unexpected places were in the news in early 2025, and tragic losses occurred in Los Angeles, South Carolina, New York and other areas with drought conditions.

Since beekeeping is so essential to global food security – including foods that are the richest in their antioxidant and polyphenol benefits – attention to the plight of the bees and the beekeepers has intensified. North American and European agriculture are threatened by ecological crises and the international crisis of authenticity of the food supply, including that of honey, compounds ecological threats.

The map of air temperatures around the globe in 2024, printed below, shows that in almost all habitable regions temperatures were above normal by 0.7 degrees C or more.

Chart 9. High Air Temperature Anomalies in 2024

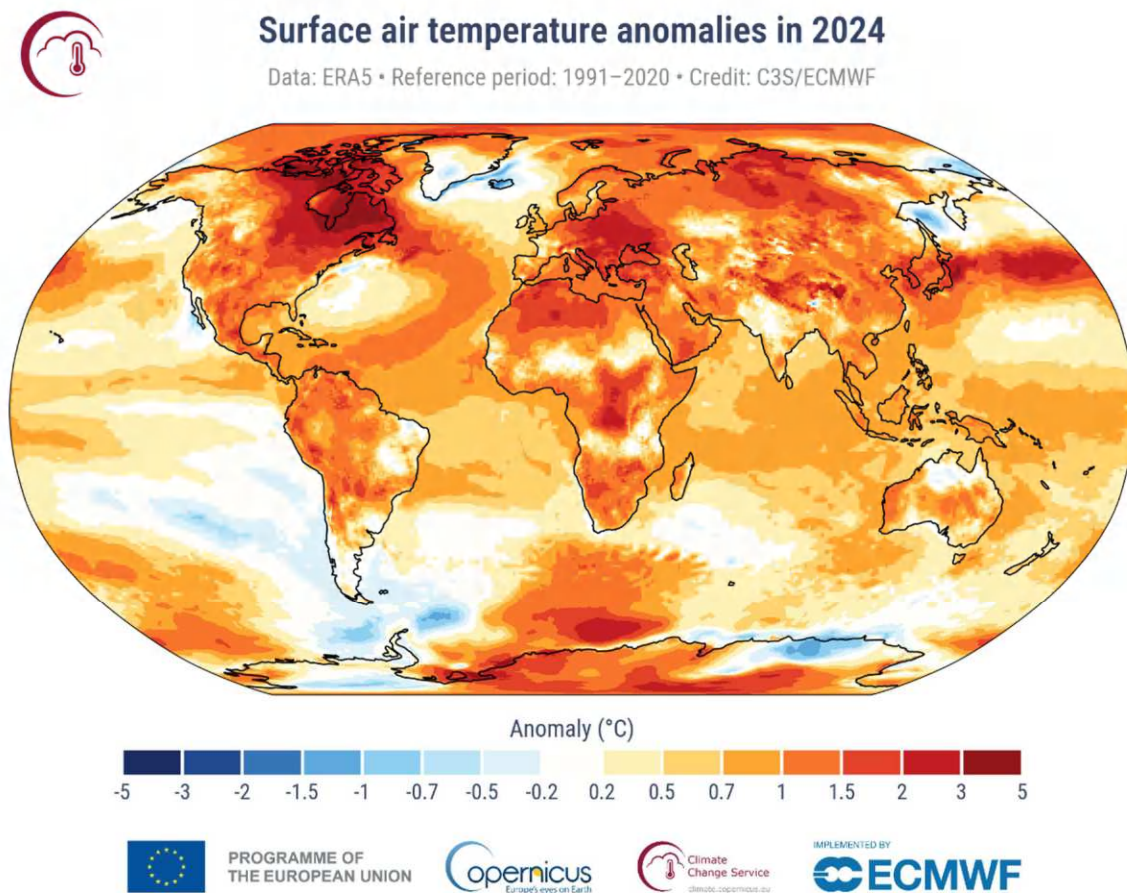


Figure 4. Surface air temperature anomalies in 2024, relative to the average for the 1991–2020 reference period. A non-linear colour scale is used to enhance the visibility of smaller anomalies and distinguish larger deviations. Data source: ERA5. Credit: C3S/ECMWF.

Focus on Authenticity

The growing alliances for authenticity are achieving great momentum. Various organizations are emerging to create a fundamental Sea Change. Those alliances include the Alliance for Honey Authenticity, the Honey Authenticity Network (UK) (Lynne Ingram and Federico Berron), and an important new organization, The American Honey Institute. This organization is led by Dr. Bryan McCornack and Gary LaGrange and is affiliated with Kansas State University, one of the great land grant agricultural universities. It has extensive contacts with academic scientists and government laboratories. Experts on agricultural economics, bee biology, and food fraud law will be brought in. Those affected by economically motivated honey adulteration will be brought into the educational process, including large retailers, industrial users and those agricultural industries that depend upon pollination by commercial beekeepers. LaGrange is founder of a company to train veterans in beekeeping. Beekeeping and working in nature reduce stress. Ironically the veterans went from the stress of battlefields to the stress of a honey market distorted by international cartels and adulterated honey!

Being forced to compete with fraudulent honey is extremely damaging, rendering beekeepers an “endangered species.” In March, 2025, the Honey Integrity Act was introduced in Congress. The legislation would require the FDA to develop a standard of identity for authentic honey and require honey packers to report their findings to the FDA when adulterated honey was detected. We hope that honey organizations, both national and international, will work to ensure that such standards are strong, effective and evolving, and will include reference to proper modes of production and processing of authentic honey.

It has become crystal clear that products are entering U.S. Customs under fraudulent categories and are being marketed to consumers under false categories. This duality of Custom and Consumer Fraud is devastating to American and global beekeepers and, if allowed to continue by governments will be devastating to American agriculture and food security.

Conclusion

Tensions within the honey industry have reached a point of clarity from which we can envision a re-birth of the industry based upon fairness, authenticity, justice and that fundamental principle that one should respect, not disparage the segment of an industry responsible for the production of the product which all other sectors sell to consumers who want to appreciate charming natural products such as authentic honey in its diversity.

A life and death struggle is being played out between cartels handling “honey” and the beekeepers of North America, South America and Europe, who are crucial to global food security.

The Current U.S.-Global Tariff War

With the announcement of the afternoon of April 2 by President Trump, the world has entered a new period of tariff wars. While the major initiative for the tariffs comes from the U.S., there will undoubtedly be retaliatory tariffs. The precise response and consequences are unpredictable. But the disruptive nature of the actions is already being felt. What havoc will result from the tit

for tat tariff regime remains to be seen, but the stability of the global economy is at risk. In January, February and April tariff increases were announced.

Here are some country-specific rates mentioned during the April 2, 2025, press conference:

China	34%
EU	20%
Vietnam	46%
India	26%
Thailand	36%
Indonesia	32%
Cambodia	49%
UK	10%
Brazil	10%
Israel	17%
Philippines	17%

In Newton's classic Laws of Motion, one of the fundamental principles is that for every action there is an equal and opposite reaction. These laws govern the orbits of the planets around the sun, the motion of a baseball, the motions of elementary particles, the motions of foods and all kinds of dynamic systems. We hear already of imposition of export tariffs, increased export prices, and the withdrawal of supply. For example, China has set up factories in many other countries to avoid antidumping duties and avoid the threat of substantially increased duties against Chinese products. That threat today is a reality. At the same time, the ability for transshipment has become more difficult and more risky for those Chinese owned enterprises.

In general U.S.-China trade relations may generate new forms of what was seen in Honeygate, where criminal transshipments and false documents led to arrests and bankruptcies through the U.S. judicial system.

These new and substantial tariffs must not be confused with the honey antidumping duties under the current antidumping order. Those rates are scheduled to be announced by April 15, 2025.

The important distinction is that the antidumping duties in the final review have the potential to charge huge retroactive duties on imports made during the first period of review. Regarding the duties, we should note that they are based on ad valorem values. At present the antidumping duties on Chinese honey are based on weight, since the exporters greatly lowered the declared values, nullifying the high duty rates, several years after the Chinese antidumping duties were put in place. The U.S. government saw through the ruse and adjusted the basis of the duties.

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