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In order to receive Hivelights you must be a current member of your provincial association. Non members such as Hobby Beekeepers, Honey Packers, Urban Beekeepers or Canadians with interests in Beekeeping can subscribe to the magazine for a $25.00 subscription fee per year.

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Schools, libraries, non beekeepers, university or government personnel can receive Hivelights magazine through special membership as "Friends of Canadian Apiculture" at no charge. Please contact the Hivelights office for more information: geoff@honeycouncil.ca

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Photo courtesy of the Paradis family

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Canadian Honey Council Report

Rod Scarlett, Executive Director, CHC

The release of the risk analysis on the importation of honey bee (Apis mellifera) packages from the United States and the subsequent extension of consultation period for submissions of risk mitigation proposals has resulted in a busy time for the apiculture sector. While the importation of packaged bees from the US remains a high priority for some, a new threat has emerged that certainly complicates the issues in the industry. President elect Donald Trump has threatened to impose a 25% tariff on all Canadian goods going into the United States. Whether this is a first volley of a negotiating tactic or clear threat, the honey industry could be facing dire consequences.

It is only in the last year or so the USA has once again become our primary export market and any tariff, let alone a 25% tariff, would have a devastating impact on the industry. We are a small industry in the grand scheme of things, so it is doubtful we could wield enough influence to seek an exemption. The CHC has approached the Canadian Federation of Agriculture to see what their plans are and if they seek sector wide consensus to assist in lobbying for concessions, we will be on board.

While the immediate concern is the prospective tariff, it should and will force the industry to look at our export sales and our absolute and total over-reliance on two markets for exports. As of October 2024, exports to Japan and the USA accounted for 96.5% of our total exports. We know we have export issues with Japan and losing the USA could spell doom for some operations. It is not a quick solution, but this should serve to demonstrate the need to diversify our export markets and at the same time enhance our domestic sales. The CHC will be increasing the pressure on CFIA to test imported honey to ensure it is not adulterated. We will press to certify that imported organic honey is truly organic and not sold as such under false pretenses.

At the same time as the CHC is dealing with the package bee issue and with a potential threat to honey sales, beekeepers from across the US and Canada have been talking about a North American strategy for the industry. Looking at this from a big picture perspective it makes a lot of sense to address issues such as honey adulteration and the threat of Tropilaelaps coming to North America, but it gets complicated when tariffs and stock replacement factor into play. The new year has the potential to bring forth strong opinions on how to deal with these complicated concerns facing beekeepers across Canada.

As an aside, I have heard rumblings that overwintering losses may be quite high. Hopefully, this will not be the case but if it is, preparations to deal with the federal and provincial governments should and will be taking place. 2025 may prove how resilient the industry is, or conversely, how susceptible it is to forces that it cannot control.

Rob Currie Named Professor Emeritus

Submitted by Rod Scarlett, Executive Director Canadian Honey Council with permission of Bee Culture Magazine

Dr. Rob Currie, senior scholar in the Department of Entomology, has been named professor emeritus for his distinguished service to the University of Manitoba. The title is one of the University's highest honours. Individuals are selected on their distinguished service to teaching, research, creative and scholarly works and service.

His nomination reads:

Dr. Robert Currie

An alum of the Faculty of Agricultural and Food Sciences, Rob returned to the University of Manitoba in 1991 as an Assistant Professor in the Department of Entomology, where he has served his discipline and the University with distinction for 32 years. Rob held the role of Head of the Department of Entomology for ten years, providing leadership to a Department that had recently undergone a major renewal and sound mentorship to a retinue of junior faculty members.

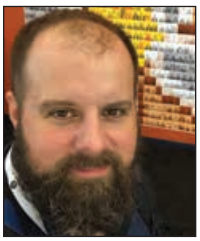
An internationally recognized expert in apiculture and commercial bee management, particularly in the area of honey bee pests and diseases, Rob's research on varroa mite management through honey bee resistance and the control of honey bee viruses has been widely recognized by his peers. He has received no fewer than nine research and service awards acknowledging his outstanding contributions to the beekeeping industry, including the Canadian Honey Council Willie Baumgartner Memorial Award, the Canadian Association of Professional Apiculturists Outstanding Service Award, and the Alan Clemson Memorial Foundation Award for Excellence in Honey Bee Research (from the New South Wales Apiarists' Association).

During his career, Rob secured more than $29 million in collaborative and personal grants from government and industry sources, bringing nearly $3.5 million in research grants and contracts to the University of Manitoba. He graduated 16 M.Sc. or Ph.D. students, as well as supervising over 60 summer students, technicians, and research associates and served on 32 additional student advisory committees in eight different departments. Rob authored or coauthored 56 refereed scientific articles, 13 book chapters and review articles and more than 80 other publications and research reports; he and his many trainees have delivered over 300 presentations disseminating knowledge to the scientific community and to the apiculture industry.

Rob taught courses at the diploma, degree, and graduate levels and regularly lectured on different topics in other courses. As a well-appreciated instructor, Rob received many awards, including the Teacher of the Year Award from Agriculture Diploma students three times. Notably, he taught the Beekeeping course for 30 years, nearly a third of its 102-year history; over 3,000 students have taken the beekeeping course since its inception in 1923. In recent years, Rob adapted the course for hybrid delivery and created a version offered through the Stony Mountain Penitentiary

Regional Reports

Atlantic



Rodney Reid

As the year draws to a close and winter sets in, we begin to consider what the new season will bring. We face several challenges, including harsh winters, variable weather, and pests like Varroa mites (except for Newfoundland and Labrador). These factors require careful management and overwintering strategies. This winter is forecasted to be mild and wet for Atlantic Canada, and it seems to be shaping up that way. Hopefully, we will have a consistent winter that isn't too harsh on the hives, allowing us to enter spring with minimal losses. Despite these difficulties, our beekeeping community remains resilient. Many of us are involved in research and other initiatives to improve bee health and sustainability.

This time of year, is also marked by meetings, AGMs, conferences, and networking opportunities. Volunteering for your local beekeeping association offers numerous benefits. It provides education and networking opportunities while learning about beekeeping and building a sense of community among members. Volunteers contribute to the overall success of the industry, conservation efforts, and advocacy to promote sustainable practices. Association work offers a supportive network and opportunities to develop various skills. Additionally, volunteering brings personal fulfillment, enjoyment, and the chance to positively impact the environment and local agriculture. It's a meaningful way to connect, learn, and make a difference in your community. As positions open on your local board, don't hesitate to raise your hand and get involved.

Through collaboration and innovation, we beekeepers continue to navigate challenges and contribute to our communities' sustainability. Wishing you all the best and a successful year ahead.

Québec

Maggie Lamothe Boudreau, agr., M. Sc.

En ce début d'année 2025, je tiens à vous adresser mes vœux les plus sincères pour une année remplie de santé, de prospérité et de succès, tant sur le plan personnel que pour vos protégées, les abeilles. Voici quelques nouvelles importantes que je souhaite partager avec vous.

Subventions et soutien financier

Le MAPAQ a annoncé le renouvellement de la subvention Initiative Productivité Végétale. Si vous n'avez pas pu en bénéficier l'an dernier, c'est le moment idéal pour tenter à nouveau votre chance. Cette subvention vise à appuyer vos efforts pour améliorer la santé et la productivité de vos ruches, tout en soutenant la modernisation de vos équipements. Comme toujours, les fonds seront attribués selon le principe du premier arrivé, premier servi.

Événements importants

Réservez dès maintenant les 21 et 22 février pour la Journée d'Information Apicole (JIA) et l'Assemblée Générale Annuelle (AGA) des Apiculteurs et Apicultrices du Québec. Ces deux journées, qui auront lieu au Château Joliette, seront l'occasion de discuter, entre autres, des cotisations et des décisions stratégiques pour notre industrie. Les informations logistiques seront disponibles dans le bulletin hebdomadaire des Apiculteurs et Apicultrices du Québec – restez à l'affût pour vous inscrire rapidement.

Avancées et défis de 2024

L'année dernière a été marquée par des conditions météorologiques imprévisibles, une diminution de la production de miel et des fluctuations importantes des prix.

Au Congrès de l'UPA, une nouvelle grille tarifaire a été adoptée pour le financement de l'organisation. Par ailleurs, un soutien financier a été sollicité pour épauler notre association, qui dépend en partie des cotisations établies selon le nombre de ruches de ses membres. Cet appui témoigne de la reconnaissance croissante de nos efforts collectifs au sein de l'UPA.

Le comité des éleveurs de reines poursuit ses travaux avec succès. Les critères d'admissibilité devraient être publiés sous peu. Restez attentifs au bulletin hebdomadaire, à la revue L'Abeille et à notre site web, où les détails seront affichés prochainement. Ce comité et ses membres contribuent à renforcer la compétitivité de l'apiculture québécoise et canadienne.

Appel à votre soutien

Votre cotisation annuelle à l'association est essentielle pour maintenir la qualité de nos services et nos activités. Grâce à vos contributions, nous pouvons continuer à travailler efficacement sur des dossiers prioritaires et vous offrir des ressources adaptées à vos besoins.

Je tiens à adresser un merci spécial à Raphaël Vacher, président de l'AADQ, pour son travail exceptionnel sur plusieurs dossiers importants au sein de notre organisation.

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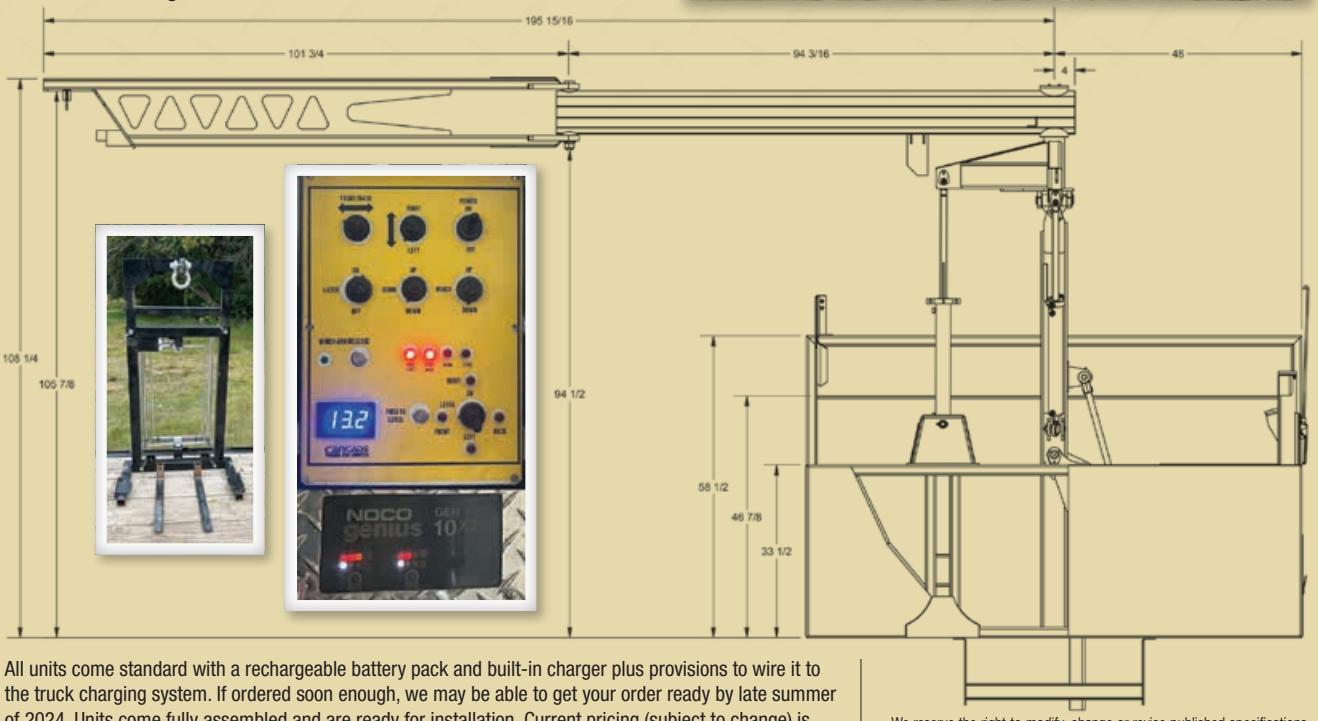

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En 2025, notre engagement demeure ferme : travailler au développement de notre industrie et soutenir les apiculteurs et apicultrices dans leurs défis quotidiens.

Au plaisir de vous retrouver lors de nos prochains événements. Prenez soin de vous et de vos proches.

———————

As we begin the year 2025, I would like to extend my warmest wishes for a year filled with health, prosperity, and success, both personally and for your cherished bees. Here are some important updates I would like to share with you.

Grants and Financial Support

The MAPAQ has announced the renewal of the Plant Productivity Initiative grant. If you were unable to benefit from it last year, now is the perfect time to try again. This grant is designed to support your efforts to improve the health and productivity of your hives while helping modernize your equipment. As always, funds will be allocated on a first-come, first-served basis.

Important Events

Save the dates : February 21 and 22 for the Beekeeping Information Day (JIA) and the Annual General Assembly (AGA) of the Beekeepers of Quebec. These two days, which will take place at Château Joliette, will be an opportunity to discuss, among other topics, membership fees and strategic decisions for our industry. Logistical details will be available in the weekly bulletin of the Beekeepers of Quebec—stay tuned to register promptly.

Progress and Challenges of 2024

Last year was marked by unpredictable weather conditions, a decrease in honey production, and significant fluctuations in honey prices.

At the UPA Congress, a new fee schedule was adopted to support the organization financially. Additionally, financial assistance was requested to support our association, which partially depends on membership fees based on the number of hives owned by its members. This support demonstrates growing recognition of our collective efforts within the UPA.

The Queen Breeders' Committee continues its work successfully. Eligibility criteria should be published shortly. Keep an eye on the weekly bulletin, the L'Abeille magazine, and our website, where details will soon be posted. This committee and its members contribute to strengthening the competitiveness of Quebec and Canadian beekeeping.

A Call for Your Support

Your annual membership contribution to the association is essential to maintaining the quality of our services and activities. Thanks to your contributions, we can continue to work effectively on priority issues and provide you with resources tailored to your needs.

I would like to give special thanks to Raphaël Vacher, President of the AADQ, for his exceptional work on several key organizational issues.

In 2025, our commitment remains steadfast : to work for the development of our industry and to support beekeepers in their daily challenges.

I look forward to seeing you at our upcoming events. Take care of yourselves and your loved ones.

Ontario

Albert Devries

Greetings from Ontario. This past fall has been one of the most mild on record. In the South Western part of Ontario where I live bees were getting cleansing flights right up to the beginning of December. Most hives carried brood longer than normal and look pretty good because of the extra young bees.

The honey crop varied with most beekeepers coming in below average.

However, some beekeepers were in the right spot and got a significant crop.

The Ontario Beekeepers' Association, held their all AGM and Conference in Niagara Falls mid November . It was well attended, and new board members were elected. I would like to thank outgoing president, Ian Grant for his leadership and hard work. I'd also like to welcome Steven Moore our incoming president. The OBA membership, received some good news and found out that the provincial government will supply some limited funding for our Technology Transfer Program.

Well done. I hope for a good winter and that we will be in our Bees soon.

Manitoba

Osee Podolsky

Fall has wrapped up and the bees have finally been put to bed for the winter. Many Manitoba beekeepers didn't put their bees into their wintering building until nearly the middle of November due to the mild weather. This ended up being beneficial as many beekeepers struggled through the fall trying to get mite loads under control with many beekeepers requiring many additional treatments and differing treatments to reach a control threshold. Some operations failed to reach controls that instilled confidence for overwintering health, but at this point in many cases the damage was done. There is significant concern around how many hives will not survive the winter and how high spring colony losses will end up in MB. Colony numbers are already down going into winter with high numbers of colonies becoming non-viable over the course of the honey production season and through the fall. The majority of failed colonies seemed to be due to hives becoming queen less in August and failing to be able to supersede, or colonies in September/October crashing due to what seems to be mostly viral loads. Additionally with extremely poor honey production averages across the province many beekeepers are feeling the pinch. Low honey prices, low honey production, and high colony losses are a difficult position to be in. I wish I had less depressing news but this is the reality of the current beekeeping situation in Manitoba. Beekeeping is such a volatile industry and is so easily influenced by external factors outside of beekeepers control its becoming nearly impossible to remain viable. Beekeepers can make all the correct management decisions and still be blindsided by the weather or an

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out of hive product. The Manitoba Beekeepers Association is and will continue to work towards the development of Risk Mitigation Protocols to import package bees from the continental USA as we must have access to healthy, affordable, and secure replacement stock to be able to maintain operations and provide some safety net of stability.

The Manitoba Beekeepers Association will be holding our 199th Annual Convention, AGM, & Tradeshow Feb 20-22nd. With this year's featured speakers being Bob Binnie, Dr. Nuria Morfin, Dr. Allison McAfee, and Dani Glennie. Registration can be made at mantiobabee.org

On behalf of the Manitoba Beekeepers Association a thank you goes out to Daryl Wright for his many years of service being the secretary of the Manitoba Beekeepers Association. Daryl has retired from his position and the MBA board has welcomed Shaun Kendrick as our new Secretary.

I hope everyone had a Merry Christmas and a Happy New Year.

Saskatchewan

Jake Berg

As 2024 draws to a close, it has been a challenging year in Saskatchewan and across the prairie provinces. We have seen low honey prices coupled with difficult weather throughout the 2024 season, increased EFB breakouts, and higher than normal Varroa loads this fall.

This has all compounded to make 2024 for a very strenuous year.

CFIA has been working on a risk assessment for package bees from the continental US and has asked for science based risk mitigation strategies. CHC has been working with the Alberta Beekeepers Commission, Manitoba Beekeepers Association and the Canadian Bee Federation, in a joint effort to find mitigation strategies that would be acceptable to most Canadian beekeepers. These groups have hired a consultant, that will put together a proposal to submit to CFIA. The submission deadline has been extended from January 9 to January 31, 2025.

We were definitely seeing higher levels of Varroa mites, than I would deem comfortable, in Saskatchewan this fall while the bees were being wrapped or going inside. This will most likely mean higher than normal mortality rates in Saskatchewan in the spring of 2025. Hopefully these predictions are wrong.

Happy holidays and Best Wishes in 2025!! May it be a normal, easy, and bountiful year!!

Alberta

Jeremy Olthof

As this will be my last Hivelights report I want to start by introducing the two newest directors that will be replacing Ryan Hicks and myself. Real Dubeau has been a long-time board member on the Beemaid board and will bring a wealth of knowledge and experience. Lorne Prins has served on the ABC board for several years filling the roles of vice president and treasurer, his love of politics will serve him well on the national board to keep all the unruly riffraff in line… but maybe that was just Ryan and myself so it will easy. As most are probably aware the CFIA risk assessment was released and a deadline for mitigation strategies was given for early January. CHC along with CBF and a few provincial associations requested an extension to January 31 which was granted by CFIA. ABC has hired Serecon as a consultant to work with industry to develop a submission to CFIA for mitigation strategies. During the AHPA meetings in San Antonio the feeling from the California package and queen producers was that current queen protocols should suffice, and that further mitigation is unnecessary. There was also talk of approaching this as a trade challenge in light of the current political situation the feeling from some package producers is that this may be an easier route to take. In my opinion, this route will challenge the current import protocols that exist for New Zealand, Australia, and Chile. CHC is working with CFIA to develop a current spreadsheet of all current package bee import protocols not only for comparison but also a tool for ongoing monitoring as threat profiles change globally. January will be a busy month of meetings working with Serecon to finalize our submission. Work on the PRA will also continue in January as we prepare a funding submission so that our consultant can begin the actual work of developing the framework and begin consultations with industry. CHC will be hosting its AGM in Ottawa February 6-8. I hope to attend but as with my reason for stepping off CHC it will depend on my daughter's ringette/hockey schedule.

British Columbia

Jeff Lee

At the B.C. Honey Producers Association's fall Annual General Meeting in Vernon in October I was elected as the new CHC director for B.C. I had been appointed as the interim director in January after Stan Reist, the long-serving BC director, resigned as a result of some health issues.

Our retiring president Heather Higo recognized Stan for his long service with a special president's award. Stan has rebounded strongly, and he remains a valuable resource to me in my new job.

My Goals as the CHC Director for BC

B.C. occupies an important place in the Canadian beekeeping landscape, both as the western, temperate corner, and as a province of largely small-scale or hobbyist beekeepers. Our fragmented geography and multitude of ecologically different zones doesn't encourage the large scale of beekeeping of our prairie neighbours. Many beekeepers are in densely urban areas of the Lower Mainland, Okanagan and lower Vancouver Island. We have strong commercial sectors in the Okanagan, Cariboo, Kootenays and Peace regions. We're a strong part of Canadian beekeeping culture.

Our economic and agricultural issues require perhaps a different reality than say, the large-scale production of honey in our three biggest producing provinces, Alberta, Manitoba and Saskatchewan. We have the largest number of beekeepers by province, but our hive numbers are far less than Alberta, although approaching that of

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Saskatchewan. We produce more honey than Quebec, and nearly that of Ontario, both of which have fewer registered beekeepers than BC.

And yet I believe we all face common issues. These include honey bee health, stock replacement, research, education, and protection of our industry from fraud or loss of consumer confidence.

My goal as the BC director is to act in the best interests of the national industry, through a BC lens. Canada's honey industry enjoys a great worldwide reputation. Consumers around the world value Canadian honey. I take it as my job to help keep that reputation intact, and to build capacity for our beekeepers across Canada.

I encourage you to reach out to me via email, text or phone call on issues you think I should be aware of.

BC's position on the CFIA Risk Assessment on US Package Bees

The federal Canadian Food Inspection Agency recently released its scientific assessment of potential risks to reopening the Canada-US border to the importation of packages from American producers.

It recently extended a public commenting period until Jan. 31, 2025, seeking science-based comments on its on its technical evaluations.

The BCHPA executive is formulating a response to CFIA, framed both in a national context and in how our provincial beekeepers may be affected by package bees from the United States.

In November, 2024 as interim BC director I supported a general motion by the CHC board to "support a national effort to cooperate with a consultant to develop scientific mitigation protocols that CFIA can use to determine whether or not the four risks identified as moderate in the "Risk Management framework on the importation of honey bee packages from the United States" can be reduced to negligible."

I want to be clear that this does not mean that BC, like the other main provinces concerned about a reopened border - Saskatchewan, Quebec or Ontario - voted in favour of such a reopening. We did not. We simply agreed to explore whether proper mitigation measures to protect Canada could even be developed.

I believe this is an appropriate action, even if our membership decides later to reiterate its longstanding opposition to reopening the border. It is prudent to plan for how to deal with any of these diseases or pests should they somehow get to Canada. We need to be prepared. It is a position I suspect many old beekeepers wish they had taken back in the 1980's when varroa first made its appearance in the US and then spread to Canada.

Our provincial apiculturist Paul van Westendorp and I differ in our views about the potential damage that could be caused by package bees from the US. He argues that all of the problems except AHB are already likely here, and that beekeepers' reliance on foreign packages and queens from other countries has likely resulted in the transference of some of those pests.

I argue that we should be ensuring that the same mitigation measures are applied equally against all potential importers of queens and packages to Canada. Including the US, New Zealand, Australia, Chile, Italy and elsewhere. And yet I can't actually tell you what mitigation measures are in place with our current import permits from those other countries.

How British Columbia may differ from other provinces

The BCHPA executive has created a short-term "Risk Assessment Committee" to examine the impact of any CFIA decision regarding US package bees. We are looking at the potential damage to BC should the border be reopened. This includes what affect it could have on the made-in-BC queen-breeding industry that has developed since the border was closed, as well as who might be impacted.

Given that many of our hobbyist beekeepers live in or around major cities, I also want to understand what happens if package problems were to arise and gain a foothold in dense urban areas. It is not acceptable to me, nor should it be to other beekeepers, that we take the attitude of "well, it may be here already so we'll have to live with it".

Bee Health Issues in BC

We entered winter in BC coming off an extended mild fall that followed a sharp, dry summer. Many beekeepers reported unusually high populations of wasps and yellow-jackets, which cleared out many weaker hives.

As a result of the mild fall, beekeepers reported sustained difficulties in reducing high mite loads well into late October. This was despite significant efforts to treat early and often, using both formic and oxalic acids.

I received a number of reports of ineffective applications of Apivar, the amitraz-based miticide that many beekeepers depend upon for fall cleanup.

BC researchers at University of B.C. and Simon Fraser University continue to work on several projects related to identifying fraudulent honey and developing new potential miticidal compounds.

The BCHPA's Tech-Transfer Program lost its lead, Nuria Morfin, to the University of Manitoba as an assistant research professor. She has been a huge help to our nascent program, and we wish her the best. After a search overseen by Nuria, we hired Dr. Fahim Raza as a technician in apicultural research. He will oversee and finish research projects started by her.

BCHPA Semi-Annual Takes To The Road

For at least the last 15 years the BCHPA's spring semi-annual business and education days have been held in Kamloops. This year the executive decided to take the show on the road as part of an effort to reach more of our members around the province.

This year the event will be held in the East Kootenays city of Cranbrook, which has a strong population of beekeepers. The event will be held March 21-23 at the Prestige Inn. It will feature a number of keynote speakers, including Andony Melathopoulos, from Oregon State University, and Shelley Hoover from Lethbridge University.

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Call For Research Proposals

Bee Maid Honey Limited is pleased to announce the continuation of apicultural research funding.

Bee Maid Honey Limited will consider project proposals in any area of apiculture, hive health or honey production. Preference will be given to the area of honey quality and good practices of producing pure quality Canadian honey in the Canadian beekeeping industry.

Proposals for projects must be submitted to the Bee Maid Honey Research Committee by February 28, 2025. Projects are expected to be completed within one year of funding, although renewal applications will be considered.

BC Beekeeper and Honey Producer Wins Leadership Award

Submitted by HONEY BEE ZEN

Jeff Lee

Jeff Lee with Amanda Goodman

Images by Picnic Creative and provided by BC Food & Beverage

[Creston, British Columbia] – Jeff Lee, a BC beekeeper and co-owner of Honey Bee Zen Apiaries Ltd. and Swan Valley Honey located in Creston, BC was awarded the Leadership Award at the 2024 BC Food & Beverage Rise Awards event held Thursday, November 28th at the Anvil Centre in New Westminster, BC. Lee, a former career journalist who co-owns the largest producers of honey in the Kootenays with his wife Amanda Goodman Lee, was singled out for his tireless work and invaluable contributions to the BC honey and food industries, and for helping five Ukrainian families move to safety in Canada as a result of the war within their country.

Lee was nominated for the award earlier in the fall along with Marc Wandler, co-founder and CEO of Susgrainable and Laura Cuner DuBois, founder of Avafina Organics, as part of the BC Food & Beverage (BCFB) Rise Awards which celebrates the best in the province's food and beverage industry. In addition to the Leadership Award, the BCFB awarded top honours to producers in categories of Best in Brand, Circularity, Emerging Business, Export, Indigenous Led Business, Social Impact, Innovation,Sustainability and others.

Lee was nominated not only for his support for resettling Ukrainian workers, almost all of whom work in the honey or grocery business, but also for his many years of support and service within the BC's honey industry. He is a long-time executive member of the BC Honey Producers Association, BC director of the Canadian Honey Council, and chairman of Fields Forward, a Creston-based society that runs the Kootenay Farms Food Hub and assists farmers and food producers in southeast BC get value-added products to market.

"I am both honoured and humbled by this recognition," Lee said at the awards event. "BC is a Canadian hotbed for entrepreneurial food producers and processors, and the BC Food & Beverage Rise Awards helps showcase that talent." He added, "I believe firmly in helping others within our food sector and as an immigrant myself to Canada, helping settle the Ukrainian families into the Creston Valley was the right thing to do. Canada has been very generous to us, and I wanted the families to also experience my country's generosity."

The Lee's company is active in supporting BC's honey industry and elevating honey as a food source, leading the way in developing innovative high-quality products. Earlier this year Honey Bee Zen won top North American honours for its Creamed Honey, single flower Fireweed Honey and Cranberry-Orange Infused Honey at two prestigious shows in the United States.

ABOUT HONEY BEE ZEN APIARIES LTD. and SWAN VALLEY HONEY LTD.

Honey Bee Zen Apiaries Ltd. and Swan Valley Honey Ltd. are the largest producers of local, raw honey in southeastern British Columbia. As beekeepers our mission is to ethically produce and source 100% pure, natural and innovative honey bee products from British Columbia and western Canada, and provide pollination and educational services to foster hive health and a thriving industry. Our vision is to provide award-winning honey products and services while elevating the understanding and appreciation of the essential role of honey bees and beekeepers in agriculture, environmental biodiversity and local food security. For more information, visit: www.honeybeezen.com See also: BC Food & Beverage Rise Awards

Survival of beneficial bacteria in different media for targeted delivery to hives

Rhea Dumitrescu[1], Brendan A Daisley[2], Graham J Thompson[1]

The management of honey bees (*Apis mellifera*) has become increasingly difficult due to a confluence of biotic and abiotic stressors that afflict commercial apiaries. Advanced microbial therapeutics can help mitigate some of this stress by restoring or bolstering the bee's native gut microbiome, thus leveraging its innate capacity to extract nutrients, detoxify agrochemicals and defend against gastrointestinal diseases. The application of bee-tailored probiotics shows promise, but – beyond choosing which microbial strains to use – there is the practical challenge of delivering live bacteria to the hive, typically in doses of millions of cells or more. Here, we use three lactic acid-producing probiotic strains to evaluate the efficiency of various media types as potential delivery vehicles.

We found that conventional protein patties and phosphate-buffered saline solution (which enables a spray-based administration) showed promise as efficient delivery vehicles. Specifically, the mean survival of *Lactiplantibacillus plantarum* Lp39, *Apilactobacillus kunkeei* BR-1 and *Lacticaseibacillus rhamnosus* GR-1 (together knowns as LX3) was at least 21 days in patty or in PBS at 37°C. Patties and PBS therefore offer edible and topical solutions for probiotic delivery, respectively, provided LX3 is delivered within the first few days of the initial culture. We found survivorship could be significantly extended if stored at lower temperatures (24°C, 4°C), which has implications for the shelf-life of a stored product. Finally, we tested a third vehicle, a sucrose solution commonly used by beekeepers as a feed supplement, but it performed poorly; bacterial survival generally plummeted within the first few days.

Overall, our lab results suggest multiple avenues for developing a future product for delivery of probiotic cultures to large numbers of managed honey bee colonies. The starting cell concentration and temperature-dependent growth rates are important considerations. Our next step is to validate the successful strain and media combinations determined from this project in the field at Western University's Teaching, Research & Community Apiary. We will measure how each strain and media combination of interest affects queen survival, worker acceptance, queen egg-laying rates, microbiome dynamics and infection resistance. Ultimately, this work will help establish best practices for beekeepers and support the sustainable management of honey bee populations in apiculture.

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International Honey Market

by RON PHIPPS

Introduction

Some of the storms are over, and the turbulent tide is retreating. Beekeepers in America, Canada and Europe have reason to look for better days on the horizon.

There have been increased international efforts which hold the promise of greater effectiveness to overcome the actions of international cartels who have orchestrated multiple modern modes of adulteration (MMMA) which have collapsed prices, jeopardized the survival of beekeepers, and threatened ecological sustainability which depends upon diverse and vigorous populations of pollinators.

The seriousness of the stress on global pollinators was recognized by the United Nations Biodiversity Summit held in October 2024 in Colombia. The adequacy of the global honey supply cannot be abstracted from the authenticity of honey. A multi-dimensional approach can bring together beekeepers and retailers concerned with ecology and prevention of food fraud in its various manifestations.

There has been recent collaboration among governments, academic organizations and the growing alliances for authenticity. The ongoing reviews in the antidumping cases will be changing the playing field for honey exporters in countries subject to the rulings. New testing methodologies are being developed and implemented. When the tide returns, we anticipate it will bring with it progress in the quest for authenticity of honey.

Honey prices in summer 2024

The U.S. market average import honey price has declined by 20% as of August 2024, compared to 2023, and the import quantity for conventional honey was about 154,975,344 kgs (341,661,743 lbs.) at the end of August 2024. If import volumes continue at this rate, they will exceed the total volume for 2023 which was 187,182,552 kgs. (412,666,398 lbs.).

India has been the largest exporter to the U.S. in 2024 and 2023. The average price for Indian Extra Light Amber has been $0.79/lb. FOB in 2024. This value is below the Minimum Export Price which was established for Indian honey in early 2024 by the Indian government. The low Indian prices defy both 1) the enormous environmental stresses that have been suffered in Indian agriculture, and 2) the general food inflation that has plagued the U.S. and many other nations since COVID and the supply chain crisis.

Honey prices paid to U.S. beekeepers for Dakota White Clover in August 2024 were in the range of $1.75/lb. By September/October, after the completion of the U.S. and Canadian honey crops, premium Clover was being sold at a level of $1.61/lb. A year ago, beekeepers were achieving prices in the $2.00-$2.30/lb. range. Furthermore, beekeepers are being compelled to sell not just their crops, but for many, their bees. That includes major beekeepers. "Lack of funds is resulting in bad decisions" said one beekeeper, "everyone is angry at the prices."

Dr. Stan Daberkow, emeritus economist at the USDA, has put the U.S. and imported prices into perspective, showing monthly and annual prices in Charts 2 and 3. The pattern of price declines which began in 2022 is continuing, a dreary picture.

The depths to which the Masters of Market Manipulation have driven the market, and the extraordinarily low antidumping rates that have been achieved for the major sources of depressed honey prices, are startling. Low antidumping rates and the diversity of qualities coming from the Indian market have functioned as a dead weight, pulling the entire market down.

Prices paid to Canadian beekeepers for White and Extra Light were reported at US $1.35-1.43/lb. in September 2024 in the National Honey Report.

Chart 1

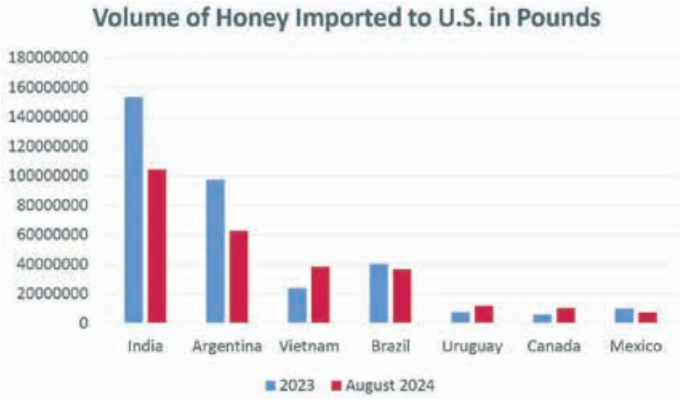

Chart 2

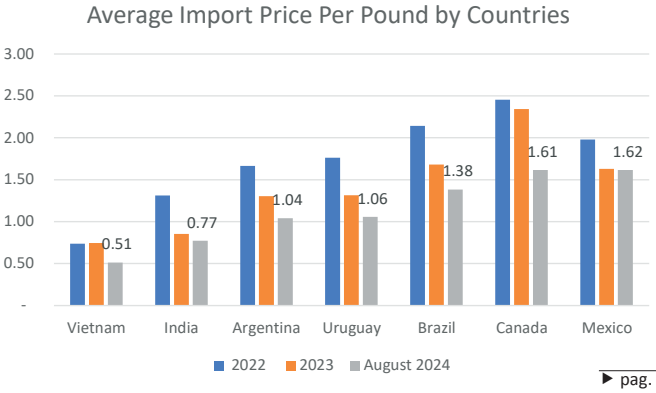

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Chart 3

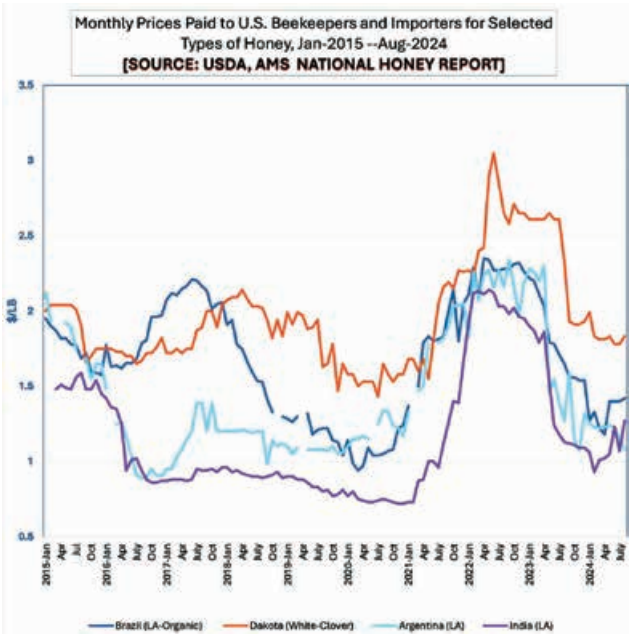
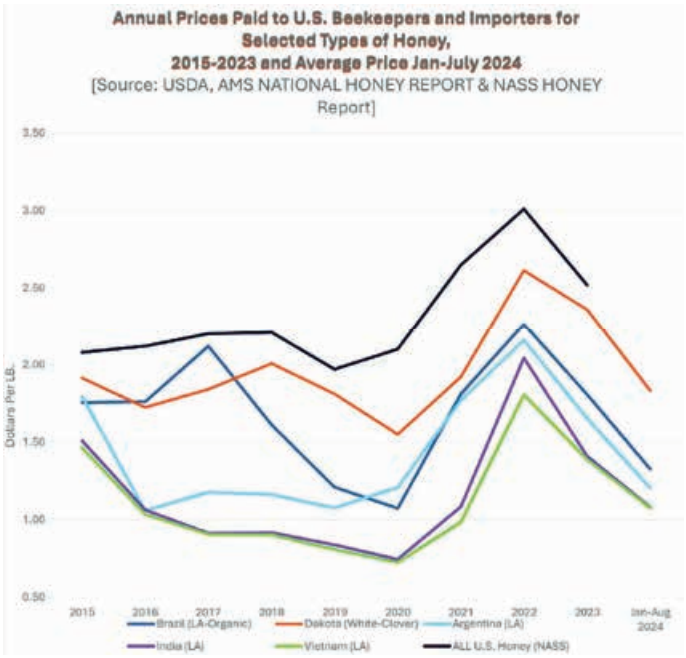


Chart 4



Perspectives of beekeepers

Joël Schiro, President of the SPMF, the French beekeeper's institute, has said, "We can't compete with the packers serving the retail trade with foreign honey." French beekeepers are compelled to adopt methods of selling directly through various channels to consumers, marketing authentic honey from this or that geographic area and floral source. This trend is also developing elsewhere.

Among the most vehement, detailed and articulate protests against the adulteration of Indian honey is found in extensive reports from Indian beekeepers who cannot compete with the cartels selling adulterated honey within India. (Down to Earth magazine described and exposed the practices within India.) The leaders of the cartels — whatever product — sit in their mansions, drive fancy cars, and sip gin-and-tonics and martinis, while beekeepers are losing their businesses and homes, and eroding their life savings.

For five decades China has seduced American businesses to outsource manufacturing for a huge variety of products, to the detriment of the manufacturing companies in America, which have shrunk or disappeared. Around the world, the endless flood of cheap imported honey is causing domestic honey producers in France, the U.K., Estonia, Hungary, Canada and the U.S. to struggle for survival.

In a recent Bruker podcast, Robert Podolsky of Manitoba described the consequences of honey fraud for beekeepers in Canada who are struggling financially. Bee losses have contributed to reduced volumes of honey production in Canada, and the producers face problems selling authentic honey when they must compete with low-priced imports. Consumers are being offered cheap honey on grocery shelves. He uses nuclear magnetic resonance (NMR) testing in its full spectrum and expects that demand for authentic honey will come back after fake honey is detected through more comprehensive analysis. The website is: https://www.bruker.com/en/products-and-solutions.

Honey antidumping order status

Preliminary antidumping rates as of July 2024 were announced for the period of review November 2021 to May 2023 (See Chart 4).

These rates will serve as cash deposit rates until the publication of Final rates. Three exporters from three different countries received zero preliminary antidumping duty rates for this period of review. However, these rates could still change, and the Department of Commerce (DOC) has delayed announcing Final rates for Period of Review 1, with results expected in early 2025. Most of the rates have changed significantly since the publication of the Honey Antidumping Order in 2021.

Importers are required to pay cash duties at the time of importation according to the prevailing duty rates. Importers from most exporters in Argentina and from all exporters in Vietnam must pay the 58% and 60% or higher duty rates, which makes doing business with most honey exporters in those countries very risky for the importer. The increased rates on Vietnamese and Argentine exporters may result in significant retroactive duties being imposed upon honey imported prior to the final and increased antidumping duty rates. We may note that the Indian government issued a minimum export price in early 2024, which was immediately ignored, as the prices from India have continued to drive the overall market down to absurd levels. The new antidumping rates for Indian honey are basically zero, so the American market is paying less than $1.00/lb., delivered into the U.S., for Indian honey. In August, the average import price for Indian honey was $0.77/lb. FOB (See Chart 5).

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Chart 5

COUNTRY EXPORTER/PRODUCER	APRIL 2022	JULY 2024
Argentina		
Asociación De Cooperativas Argentinas Cooperativa Limitada	24.67%	58.34
NEXCO S.A.	9.17%	0.00
Industrias Haedo S.A.	49.44%	58.34
Compañía Inversora Platense S.A	49.44%	58.34
All Others	16.92%	58.34
Brazil		
Melbras Importadora E Exportadora Agroindustrial Ltda	7.89%	2.31
Apiário Diamante Comercial Exportadora Ltda [1]	83.72%	2.31
Apis Nativa		0.00
All Others	7.89%	5.31
India		
Allied Natural Product	6.24%	0.00
Ambrosia Natural Products (India) Private Limited/Ambrosia	5.52%	0.59
All Others	5.87%	0.59
Vietnam		
Ban Me Thuot Honeybee Joint Stock Company	61.27%	100.54
Daklak Honeybee Joint Stock Company	58.74%	154.47
Separate Rate Companies		120.92
Vietnam-Wide Entity	60.03%	60.03

The antidumping duty review process

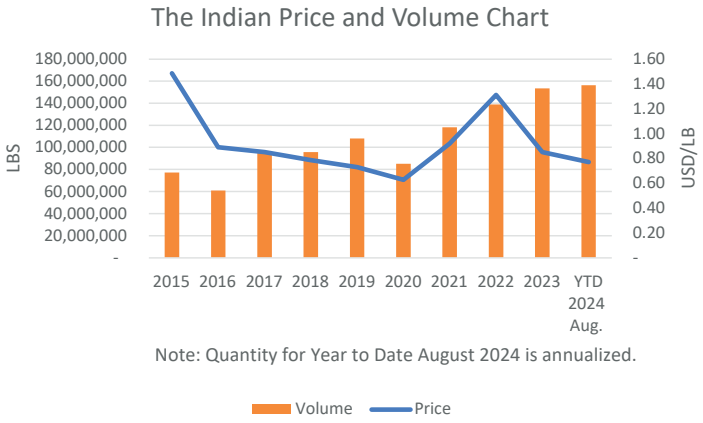
American beekeepers are deeply frustrated by the fact that during the administrative review, those conducting the cost analysis visited Argentina and Brazil to investigate, but the DOC did not send officials to India for a deep and penetrating analysis of India's cost of honey production. The lawyers say this intrusive inspection should have happened by U.S. law, all the more so given the magnitude of the price disparity for Indian honey. The DOC used superficial data in determining India's antidumping rates. The key factor during antidumping regimes is comparative rates among exporters. The low rates for India are extremely impactful because the prevalence of the use of techniques for extraction of unripe honey (which Indian exporters have confirmed), and the use of resin technology, have allowed India to export honey in extremely large quantities at extraordinarily low prices, including White and Organic honey.

Speculation is that the geopolitical competition between India, which has the world's largest population, and China, bent upon acquisition and domination of strategic resources, may explain the sharp contrast between how China's earlier antidumping petition was treated vs. how India's has been treated. The sharp disparity may reflect geopolitical and economic concerns. China's aggressive acquisitions of global strategic resources are attracting concern in Western countries and the Southern Hemisphere.

In the first antidumping case against Chinese honey, the duties were eventually set based on weight ($2.63/kg.), after it became apparent that the Chinese exporters were using customs valuations that were fraudulent and absurdly low. The high weight-based tariff rates succeeded in nearly eliminating Chinese honey from the U.S. market for two decades. Given the manipulation and falsification of import values which neutralizes the effect of antidumping duties, the evidence suggests that an antidumping duty based on weight, as was implemented in the China antidumping case, would be most effective in the honey antidumping case.

The fundamental landscape for antidumping laws is becoming a subject of political debate. U.S. Customs has indicated that they will not permit changes in corporate ownership to allow companies to evade retroactive duties. Furthermore, for countries like China, which is subject to many antidumping duties on a wide range of products, establishment of ownership of companies in third countries will not allow those companies to become exporters at the third country's duty rate. For example, China is building the world's largest auto factory in Mexico. The question is, will those inexpensive cars be exported under Mexico's USMCA duty rates or China's?

Chart 6



Imports of honey packaged for retail sale

The volume of imported honey packaged for retail sale in 2024 (Chart 7) is increasing, compared to 2023, and India is the main exporter by volume. The average price of Indian packaged honey in this category declined in the first 8 months of 2024, and the volume of Indian imports increased. Surging volumes and collapsing prices are the pattern by which Masters of Market Manipulation obtain market domination.

Importers, exporters and packers have colluded to produce ultrafiltered honey which can fraudulently enter the U.S. through a Customs category that circumvents the tariffs that should pertain to that honey. The forms of subterfuge are so clever and numerous that an absolutely multifaceted approach for adulteration detection is required to prevent destruction or domination of the domestic market.

Petitioners have pointed out that INDOCAN, an Indian honey exporter, claims to have honey filtered below 25 microns,

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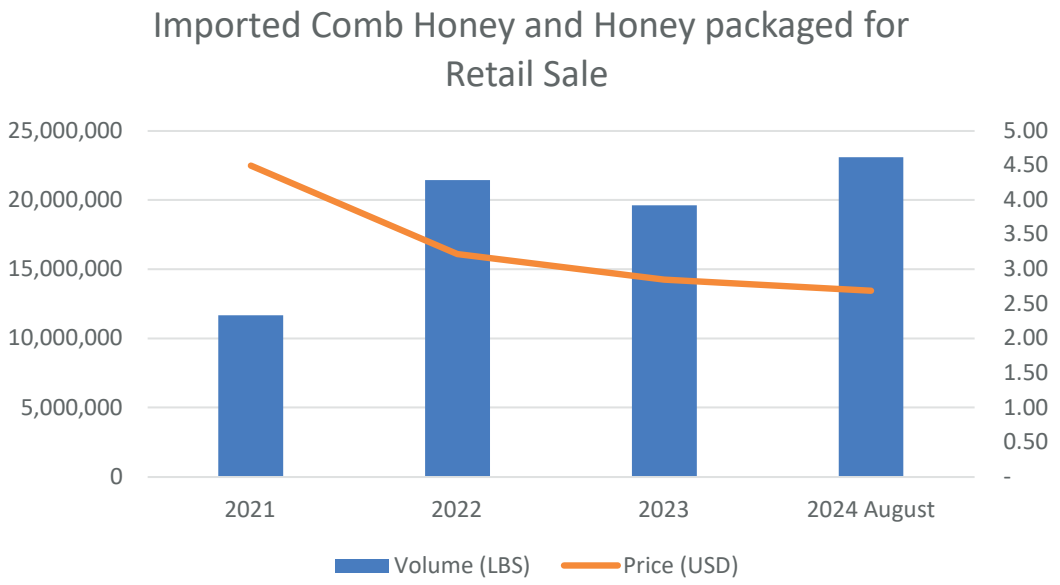
Chart 7



and this would make it impossible to determine country of origin since pollen would be removed from (raw) honey. Such honey would be outside the scope of the antidumping order if packed in retail packaging and, therefore, not be subject to any antidumping duty.

Honey adulteration testing news

In October 2024, a report cited a startling study that 80% of honey samples taken from Germany's retail shelves failed authenticity testing by DNA mass sequencing. This report received enormous media coverage. Consumers do not like to be cheated. This method of genetic analysis, another scientific tool in the toolbox for detecting adulteration, uses DNA profiles of authentic honey. The results were presented to authorities and retailers, who removed the failed honey from the market. The key fact is that if, and when, we have comprehensive honey profiles and we fully use those sophisticated scientific tools, the percentage of honey found to be adulterated is far beyond expectations.

The President of the European Professional Beekeepers Association, Bernard Heuvel, explained in a video press release that beekeepers are unable to sell their honey to European packers, and the prevalence of adulterated honey in the marketplace has created a sense of desperation among beekeepers producing authentic honey. These problems also imperil the bees' function in the food supply in respect to both the quantity and quality (health benefits) of foods consumed by the human family. The report can be viewed at https://cleanupthehoneymarket.com.

In Estonia, Professor Dr. Kaarel Krjutskov is a leading researcher using meta-DNA analysis, and he has authored a publication for biorxiv.org. Information about the laboratory can be found on the webpage mdatest. com. In addition to the recall of retail honey in Germany, there has been a recall in Lithuania. The Lithuanian Beekeepers' Union wrote to government authorities about a particular brand of honey in the Lidl grocery chain which had been tested to contain sugars atypical for honey. The Lithuanian authorities conducted an unplanned inspection and collected samples which were sent to German testing laboratories and failed testing by Bruker's NMR system. Lidl was required to remove the honey from the market (August 6, 2024 Delfi report).

Researchers at Cranfield University in the U.K., led by Dr. Maria Anastasiadi, announced two new methods to authenticate U.K. honey. The Spatial Offset Raman Spectroscopy (SORS) method, developed originally at the U.K.'s Science and Technology Facilities Council, has been shown to be highly accurate in identifying sugar syrups from various plant sources. This is a non-invasive technique, easy to implement. A paper describing the research was published in Foods 2024, Vol. 13.

The second method, used in a joint study between Cranfield University and the Queen's University of Belfast using DNA barcoding, was conducted using honey samples collected from beekeepers around the U.K., and was effective to detect syrups at the 1% adulteration level. The paper "Detection of sugar syrup adulteration in U.K. honey using DNA barcoding" was published in Food Control, Vol. 167.

Lynne Ingram, a leader in British beekeeping organizations, is engaged in valiant efforts to combat honey fraud. She has written that there is "a lack of appropriate testing and enforcement in the U.K. Interestingly the lack of testing has led to a new category of honey being sold by Chinese factories — 'U.K. grade' — honey that would fail NMR testing, rather than 'NMR grade' which

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is designed to pass NMR tests. U.K. grade honey was being offered at the very cheapest price of $1260/metric ton, whilst NMR grade was offered at $1680/metric ton." She also informed us in October, "U.K. grade honey was on sale at 0.90 US$ /kg in Paris today. The price gets more and more ridiculous!" This is equivalent to $0.41/lb. for retail packed honey.

Chinese exporters describe their immature honey as "water honey." China remains the epicenter of the creation of modern modes of adulteration of honey; it continues, as the U.K. experience shows, to tweak those modes. Indian exporters have publicly said that 100% of their honey is extracted immaturely. Vietnamese exporters have said that producing mature honey would be more expensive than the buyers would accept Reports have been circulating regarding a new wave of efforts to sell a wide variety of bio-engineered syrups into the European market that can pass commonly used adulteration detection tests. Dr. Peter Awram of British Columbia is monitoring these activities. Sellers outside of China are offering the kinds of syrups that are seen on the Alibaba website at prices of $500-700/metric ton. It has been pointed out that in Eastern European countries, including Hungary, there are huge investments from China, and trafficking in adulterated products including honey. Hungarian beekeepers have petitioned their government to put antidumping duties on Chinese honey.

In Europe, honey adulteration is being viewed as a crime subject to penalties imposed by the judicial system. The utilization of genetic analysis as a potentially important tool in the identification of adulterated honey has also begun in the U.S. The laboratory Jonah Ventures, in Boulder, Colorado, conducted testing on samples from a North Carolina beekeeper and from Walmart. The Walmart sample had only one floral source, tobacco, which was deemed to be an indicator of fake or ultra-processed honey. The beekeeper's sample contained 14 floral sources, as the bees pollinate multiple floral sources.

There are growing opportunities to promote international collaboration in this important sphere. Government scientists and government laboratories are collaborating on an international basis to address the problem whose magnitude has become increasingly clear. The private and provincial interest of the cartels and the interest of the producers and consumers are in stark contrast.

Of course those countries from which MMMA has emanated are trying to subvert the fundamental Codex definition of honey as the byproduct of the completed "interaction of botanical and zoological life forms" in the production of honey. But it is clear that they just want to continue production of adulterated honey for whose price there is no floor and for whose quantity there is no ceiling. Hence, the global crisis.

In February of this year when we spoke to the Institute of French Beekeepers and to the European Commission and the Joint Research Center, we met the heroic beekeeper who played a pivotal role in the exposure of the modern modes of honey adulteration. I had heard the story indirectly. The French beekeepers invited a large delegation of Chinese honey exporters to France, where they met near the border of Spain and France by the Pyrenees mountains. The French beekeepers complained that they can't compete with the low prices and huge quantities of low priced Chinese honey flooding the European Union, which then included the UK market. The exporters responded, "We have no problem making huge quantities, selling at low prices and still making great profits. Your problem is that you don't produce honey in the modern way, which is to extract immature honey and dehydrate it in large vacuum chambers." Walter Haefeker has compared this technique of production to beer breweries. Of course those methodologies have been expanded to include blending of bioengineered sweeteners, use of resin technology, and other means that require appropriate scientific methodologies to detect. The analytical database for the sweeteners is basically frozen. The utilization of techniques of honey adulteration have been acknowledged in public settings. Beekeepers and honey experts have eye witnessed these methods of adulteration in practice. They are blatantly advertised on Chinese websites (such as Alibaba) as effective means of eluding detection by the U.S. FDA and Customs authorities.

In the past I worked with mathematicians and chemists of the U.S. FDA research sector. This led to the issuance of a Protocol for an "International Investigation into the Chemical Composition of Honey – Preliminary Collection Outline." It was realized that the database of honey used for the carbon SIRA adulteration test (Dr. Jonathan White) was too limited because only American honey samples were used.

In addition to establishing new honey origin label claims and composition requirements, Europe's Directive EU 2024/1438 calls for the creation of the Honey Platform to help the Commission develop harmonized traceability rules that enable honey to be tracked from harvest to retail (Food Safety Magazine, June 24, 2024).

A powerful new scientific approach: Synthetic Analysis

Multi-variable phenomena require multi-variable analyses. The contrast between authentic and adulterated honey requires analysis of 1) what is present but should not be there, and 2) what is absent but should be present. Purposeful abstraction from what is present or absent are modes of deception.

A fundamentally new approach which has become possible with the development of supercomputers and artificial intelligence is being proposed. This new approach takes into account the immense chemical diversity that naturally occurs in the production of authentic honey. Those variables depend upon the floral source, the elevation, the climatic conditions, the genetics of the bees, nutrients in the soil, the conditions of moisture reduction, the methods of extraction, storage and production. This new approach creates a more comprehensive and rational way to analyze authenticity. It involves the scientifically proper method of understanding all of the variables which contribute to the wide diversity of chemical and physical profiles

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found in the wide supply of honey. This exceeds blockchain analysis because it is not simply a matter of who owns honey at one stage or another, but more importantly looks at an enhanced traceability system and at the chemical profiles resulting from this or that complex of variables. Modern computerization can quickly scan diverse and complex and multidimensional profiles and see whether the honey conforms to or violates the profiles that are causatively generated by the conditions of production, extraction, storage and processing. Multivariable phenomena cannot be analyzed by a single variable. Further, the analysis cannot be conducted by one scientific tool. The multiplicity of variables and profiles inevitably requires a multiplicity of tools in the toolbox of advanced analytic techniques. This approach allows the creation of trends among sources of adulteration which can guide appropriate analysis.

The illusion of a single variable or a magic bullet was known by some scientists involved in honey analysis quite a while ago. Dr. Joseph Bowden served as the referee laboratory for the FDA when the Department of Agriculture was implementing a honey buy-back program for American beekeepers. Dr. White used the carbon isotope method and analyzed only 100 different U.S. samples of honey from many states and diverse floral sources. Underlying this research was the presumption that there would be different carbon isotope ratios for different adulterants, such as corn and cane syrup vs. honey. There was a surprising diversity in the range of carbon isotope ratios found among this rather limited sample base of merely 100 honeys. The second year the limited sampling was repeated and the results were substantially different and unexpected. Unfortunately, to our knowledge those results were never published. Dr. Bowden correlated those results with different climatic conditions. Specifically, one year was arid and sunny, another year rainy and cloudy during the production period. The biochemical and botanical biosynthetic processes are influenced by different environmental conditions under which photosynthetic processes occur. But the reality shows that the chemical profiles are results not only of floral source and region but also other environmental and climatic variables.

Given a complex domain like honey, which is produced from a great diversity of conditions, to assess which chemical profiles indicate adulteration and which authenticity, it is necessary to have a comprehensive traceability system articulating those conditions and the complex chemical profiles that result from that diversity and multiplicity of conditions. This approach is true of all kinds of domains including the study of domains of galaxies and elementary particles, the domains of botanical and zoological genera.

Already, in the past decade, the power of AI analysis has allowed medical diagnosis of illnesses that previously were hidden or impossible to cure. This approach is much more scientific than the primitive hypothesis of seeking the magic bullet, and conforms to general scientific principles. By creating and contrasting a wide and rich range of variables science can compare and contrast profiles of adulteration vs. authenticity, disease vs. health. This is not annihilation of previous approaches but is rather a synthesis and expansion of those analytic tools. The difference is, a synthetic approach is infinitely more powerful and more accurate. It also underlies a position the author has been advocating and which has been embraced by independent academic associations and governmental authorities.

Private for-profit entities often compete with each other and in a context in which there are international cartels practicing systemic and clever modes of adulteration, there is illicit profit to be gathered by failing to investigate and identify all the variables and utilize all the analytic tools. No person facing a serious medical condition would choose not to use the most relevant advanced diagnostic tools, most sophisticated surgical tools and effective medicines to address the illness. This approach can help to identify the sources of honey adulteration and to establish the method and means of proper production of authentic honey.

There is an old book written by Darrell Huff called "How to Lie with Statistics." If we use a powerful tool but we use it looking for the wrong parameters and irrelevant profiles, the tool becomes an instrument of deception, masking rather than exposing the problems. Similarly, if we use a detection method based upon small and frozen databases, the use of that tool also may cover the deception.

Collaboration has commenced to create this synthetic, integrated approach. Universities in the U.S. West Coast, the Mountain states and the Ivy League are looking at issues of food fraud and the security and integrity of the global food supply. Scientists in various fields, including artificial intelligence, are cooperating to develop new perspectives. This type of collaboration is precisely what the European Directive is encouraging.

Geopolitical and macroeconomic context

The overall import climate has been drastically affected by COVID and the supply chain crisis, with greater volatility in the rates and availability of ocean shipping since 2020. With wars in the Middle East and Ukraine currently raging, movement of commodities has been put at risk. U.S. dependency upon external sources of essential products within the supply chain, including medicines and food, has caused alarm and a great deal of rethinking about the sources of these products.

In September 2024, there was a dock strike which lasted a day and was then postponed until January 2025. Just one day of a dock strike caused economic losses in the billions to the U.S. economy. Italy is experiencing, as I write, its first General Strike.

Not only is there increased global attention to the adulteration of honey, the dumping of honey, and antitrust violations regarding the honey industry, but also there are major lawsuits initiated by retailers against processing and packing companies for conspiring to limit supplies, artificially boosting their profits while causing other companies to lose money. A suit was filed in Brooklyn federal court by McDonald's against meat packers who manipulated the market and drove up industry prices.

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The suit alleges that this has been going on since 2015. It falls within the category of antitrust law violations. "Only colluding packers would expect to benefit because they would … know their conspiracy would shield them" (Reuters, 2024-10-07, McDonald's sues major beef producers).

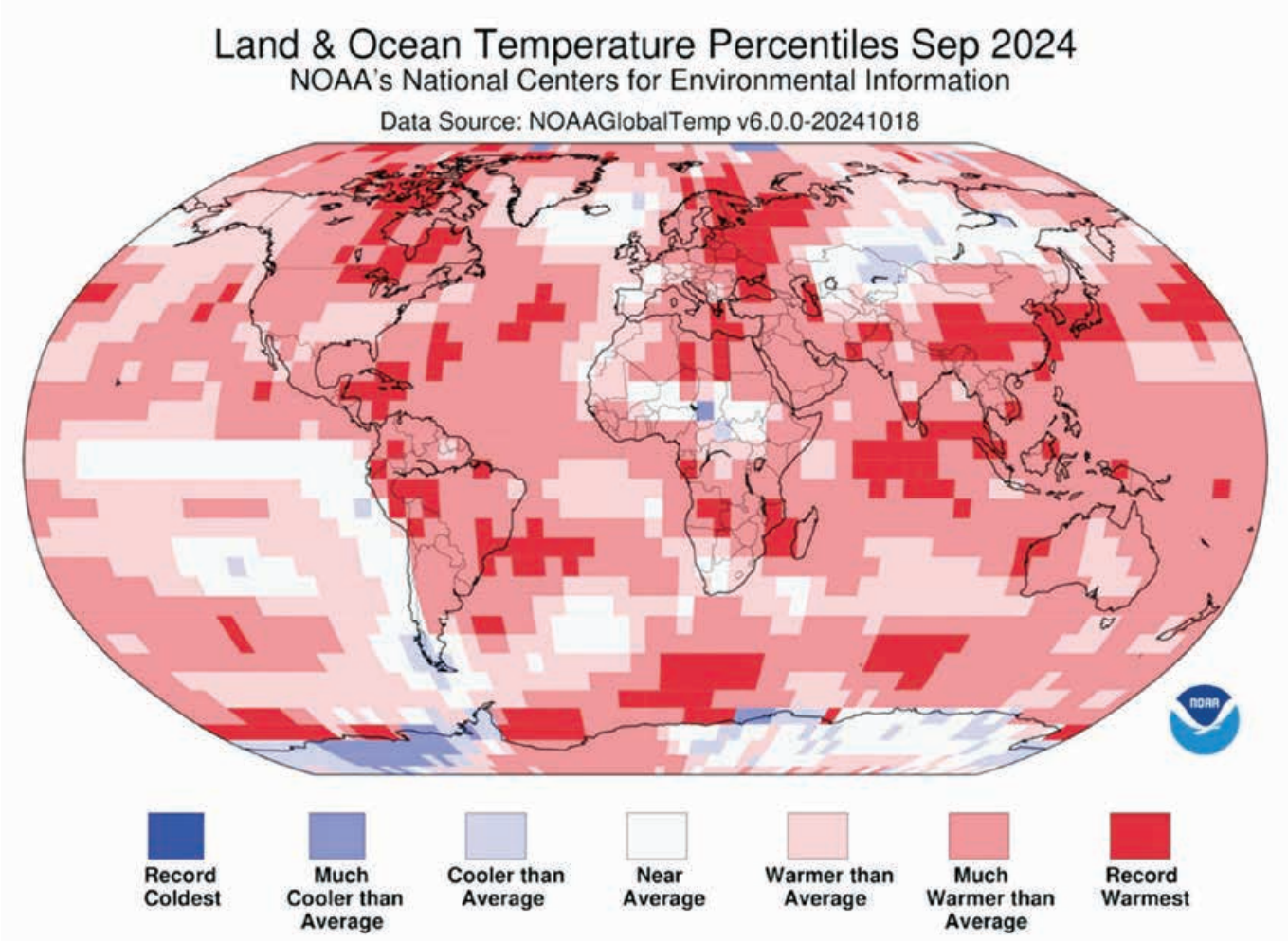
As graphs previously provided by Dr. Daberkow have demonstrated, as prices paid to the beekeepers for authentic honey plummeted, the prices paid by the retailers went up. Price data has more recently been suppressed. The multidimensional manipulation of markets and violation of antitrust conspiracy laws is becoming increasing apparent within the Western legal systems. A parallel phenomenon is emerging in the realm of Food Fraud and Economically Motivated Adulteration. Beekeepers' opposition to price fixing, commercial disparagement, honey adulteration and the insanity of an industry policing itself in ways that restrict free and open trade has been made crystal clear. Legal experts believe that the interests of beekeepers, large retailers and consumers will inevitably come together.

Climate Concerns

Of all the sectors in complex modern economies, it is the agricultural sector and the farmers who must pay the most attention to the impact of changing weather patterns and changes, in both the short term and the long term. The world is witnessing continuous increases in the volatility, frequency and severity of weather disasters. The intensity, frequency and expanse of forest fires has been dramatic. Heat waves and droughts have been breaking historic records (see Chart 8). In early October, Hurricane Helene and Hurricane Milton, with powerful typhoons in highly populated areas of Florida, created devastation in the southeast areas of the U.S. Comparable climate events have occurred in Asia and Europe.

In Europe, rivers have flooded populated areas. In contrast, the vast Amazon River and its tributaries have had huge declines in the water flow, falling to historical lows (NY Times, 10/7/2024). That river which links so many economic and ecological zones

Chart 8



is needed to maintain transportation channels. The fish in many parts of the Amazon River have disappeared. All great rivers are confluences of many tributaries. The consequences of Global warming exist within integrated networks.

There are also clear contradictions between climate stresses in Asia and China's and India's huge volume of export of "honey" which can be explained only by the use of MMMA to produce honey. India and Vietnam, unfortunately, were tricked and guided by the international honey cartels to adopt the China Model of illicit honey production. Chinese scientists have predicted that in the next 50 years China's agricultural production will decline close to 30%. This potential result of climate change underlies China's drive to acquire farms, forests and fisheries in both hemispheres.

There is growing internal and external pressure upon China, India and Vietnam to reform their practices and join the movement for Authenticity. That pressure includes local concerns about Food Fraud and anti-trust behavior.

The NOAA's map of temperature anomalies shows that during September 2024, temperature records were broken all around the world (dark red shows regions where records were broken):

The insurance industry is also dramatically increasing rates and/or precluding coverage for weather damage in many regions of the country.

The warming of the atmosphere has a correlative warming of the vast global oceans. Evidence over the past 5 decades indicates that a turning point is approaching whereby the patterns of flow within the Oceans – as an example the Gulf Stream Currents and the Japanese Current – may change resulting in a deep cooling of the Northern Hemisphere. If that occurs humanity may see climate migration changing from "South to North" into "North to South." The mathematician and metaphysician Alfred North Whitehead taught: 1) every entity is in causal interaction with its environment and s) the Universe is embedded in a Perpetual Flux of Being. We ignore such macro changes at our peril.

The aurora borealis appeared in September in North America, providing amazing light displays further south than is typical. Friends in Canada shared the spectacular photo which follows.

Photo: Northern Lights at the Bee yard at Fort St. John, British Columbia (Courtesy of the Paradis family)

Conclusion

The trend toward collaboration increases as new data and perspectives make change imperative. Our work with the European Commission, the prestigious Joint Research Center, beekeeper friends from around the world, universities and scientists continues to advance.

In past articles and in speeches at Apimondia, Norberto Garcia, Richard Adee and I have shown graphs illustrating a severe anomaly of relatively stable global bee populations, huge increases in the exports of honey, and the sharp decline in honey yields per hive during the past decades. When we consider the anomalies, it is clear – as Shakespeare said – "Something is rotten in the State of Denmark." The causes of a persistent depressed honey market are clearer than ever before. The negative consequences have attained wide global attention. The imperative of eliminating honey fraud and protecting the global populations of pollinators serves global food security and global ecological sustainability, which needs to be restored within the global community of life.

We are trying to help advance the cause of authenticity as its absence has devastating consequences to beekeepers at home and abroad with growing dangers for global food security, ecological sustainability and economic integrity.

Every great river is a confluence of multiple tributaries. We have entered a stage in which a great river is emerging to defeat honey adulteration and achieve authenticity. These tributaries will become clearer as time goes on.

Ron Phipps is Vice President of the Beekeeping Economy Commission of Apimondia, Founder and President of CPNA International, Ltd., Organizer of Vivaldi Festival, Summer 2023 at Planting Fields Arboretum, and presented "The Cosmology of an Infinite, Open and Integrated Universe" in July 2023, at the Institute of Philosophy in Munich, Germany.

Exploring queen faeces as a diagnostic tool

Leslie A. Holmes, Jemma M. Todoschuk, Patricia Wolf Veiga, M. Marta Guarna, Jeffery Pettis, and Shelley E. Hoover

The lack of non-destructive tools with which to evaluate queens is an ongoing industry challenge. We have developed a non-invasive method to evaluate queen honey bees by collecting faeces to characterize the bacterial microflora of queen faeces as a proxy for their gut microbiome. Microorganisms play important roles in digestion, nutrition, and immunity1, and can also indicate exposure to stressors2. However, destructive sampling, wherein the queen is sacrificed, limits the use and potential of whole gut microbiome studies (and the dissected queens!). Instead, our non-invasive evaluation of queen faeces permits us to characterize the queen faecal microbiome to learn more about how queen health, immunity, and physiological responses to environmental stressors change throughout her adult life. In developing these techniques, we observed queen faeces differ between virgin and mated queens; virgin queen faeces are brown and mated queen faeces are clear (Figure 1). Thus, we were interested in learning the developmental and/or environmental interactions responsible for changes in queen faeces throughout her early life. Specifically, how age and mating cause the changes we see in queen faeces between virgin and mated queens.

In the spring of 2024, we set up 40 small six-frame nucleus honey bee colonies (nucs). Each nuc contained a frame with eggs to permit workers to raise queen cells. For each nuc, all but one queen cell was destroyed after queen cell capping and the single capped queen cell was caged on the frame to prevent the newly emerged queen from leaving the colony to mate. One day old queens (n = 26) were brought into the lab for faecal sampling and returned to their respective colonies the same day. Half of the queens were returned to their colonies in queen cages to prevent them from mating, while the other half were hand released into their colonies and permitted to mate. Two weeks later, when eggs were found in the colonies with mated queens, we collected all caged virgin (n=13) and mated (n=12) queens for faecal sampling. Queen faecal samples were then sent to the National Bee Diagnostic Centre and Genome Quebec for DNA extraction and 16S rRNA amplicon sequencing, respectively, to characterize any changes to the faecal bacterial communities of each queen between the time they were one-day-old virgins and when they were two weeks old and either remained a virgin or were allowed to mate. While we are still awaiting the sequencing results, we did observe faeces from two-week-old virgin queens appear similar to faeces from two-week-old, mated queens (Figure 1), suggesting mating may not be the primary cause for the differences we see in the colour of queen faeces between newly emerged virgin and mated queens. Instead, the colour difference may be due to the consumption of cell material during queen emergence. However, the how the gut microbiome changes with maturity remains to be characterized with the sequencing data we collected.

The gut microbiome is closely linked to immune function3 in animals, and previous studies have shown a trade-off between queen bee fertility and immune function4. However, how the gut microbiome of queens develops throughout her adult life, responds to stress, and interacts with essential immune functions is not clear or easily explored given the current destructive means of study. Thus, with our non-destructive method of characterizing the queen gut microbiome throughout her adult life, we can explore how the queen's development and environment impact her gut microbiome that in turn may impact her fertility and immunity. In addition, we are exploring the potential use of queen faeces to screen queens for viral and other infections.

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Figure 1. Queen faeces sampled from a one-day-old virgin queen (1), a two-week-old, mated queen (2), and two-week-old virgin queens (3, 4).

Help Wanted 2025

Help Wanted: Big River (SK)

West Cowan Apiaries " Quality Northern Saskatchewan Honey"
Box 425, Big River, Saskatchewan. S0J 0E0

Apiary Technicians and Workers for 2025 Bee Season

Apiary Supervisor – NOC 82030 – 1 person required. Must have 3-5 seasons of full bee seasons of apiary experience required. Job Duties: Must be able to work in the presence of honey bees; assist with colony management; honey extraction and processing; queen rearing; to report beehive health issues and apply appropriate disease cures or controls. Assist in supervising and giving direction to other employees. Keep field and production records; and perform any other apiary jobs that are required.

Wage: $20.00- $25.00 per hour (dependant on experience). Job is: Seasonal F-T, Minimum of 40+ hours per week

Length of employment: April 1- October 31, 2025

Apiary Technicians- NOC 84120 – 4 persons required. Must have 2-3 full bee seasons of apiary experience required. Job Duties: Must be able to work in the presence of honey bees; assist with colony management; honey extraction and processing; queen rearing; to report beehive health issues and apply appropriate disease curs of controls. Feeding hives (spring & fall); creating nucs; carrying & stacking honey supers (80+ lbs) to the truck deck; maintaining bee yards; moving nucs inside/outside (fall & spring); building of honey supers; lids and bottom boards in the wood shop; and any other assorted apiary jobs that are required.

Wage: $17.00-$19.00 per hour (dependant on experience). Job is: Seasonal F-T; Minimum of 40+ hours per week

Length of employment: April 1-October 31, 2025

Apiary Workers (NOC 85100) – 5 persons required. Must have 1-2 full bee seasons of apiary experience required. Job Duties: Must be able to work in the presence of honey bees. The cleaning of the entire honey building; carrying and stacking of honey supers; grass cutting around the honey building and yard site; the cutting of the grass in the various bee yards; maintain the bee yards; extracting and processing honey; and any other apiary jobs that are required.

Wage: $15.30-$16.75 per hour (dependant on experience). Job length is: Seasonal F-T; Minimum of 40+ hours per week

Length of employment: July 1- September 2, 2025 (9 weeks)

Training is provided on an ongoing basis. Please do not apply if you are allergic to bees!

All job requirements: You must have a valid driver's license, and vehicle to get back and forth to work.

Experience driving a standard truck is an asset. To be in good physical condition and to be able to work in a team environment. Most jobs are performed outdoors in all kinds of weather, work is repetitive, and physically demanding.

Work locations are: SE 14-56-8 W3, our bee yards are located in the RM's of Big River, Shellbrook and Canwood.

Please apply by email to: **c.warriner@sasktel.net**. Mail or deliver in person your resume with references to: West Cowan Apiaries, Christopher & Lori Warriner. Ph: 306-469-4970PO Box 425, Big River, SK. S0J 0E0 or phone to set up an appointment to: 306-469-4970.

Help Wanted: Parkland County (AB)

TPLR Honey Farms Ltd. requires four Apiary Technicians $17.44-19.00/hr, five Apiary Workers $17.44-18.25/hr needed full time (45+ hours/week) April-October 2025. Four Apiary Workers, $17.44-18.00/hr needed full time, 45+ hours/week July-September 2025 in Parkland County, Alberta at TPLR Honey Farms Ltd. Accommodations provided. Some evening, night and weekend work. All applicants must be in good physical condition and able to work in a team environment. The Apiary Technicians must have a minimum of 2+ years (seasons) full time in a Canadian style commercial apiary with a minimum of 1 year (season) working as an Apiary Worker or Apiary Technician. The Apiary Workers must be able to work in the presence of honey bees and will assist with honey bee colony management and honey extraction/processing. The Apiary Workers must have a minimum of 1+ years (seasons) of working in a Canadian style commercial apiary as an Apiary Harvester or Apiary Worker. TPLR Honey Farms Ltd., Tim Townsend, Parkland County, Alberta. **Tim@tplrhoneyfarms.com**

Help Wanted: Prince Albert (SK)

Farmer Brown's Honey is hiring for the 2025 season.

3 - Apiary Technicians/Workers - NOC 85100 Minimum of 1-2 full seasons of apiary experience required.

Wage: $15.00 - $16.00 per hour depending upon experience.

Job includes: wrapping/unwrapping hives; spring and fall maintenance, feeding hives, creating nucleus colonies, queen-rearing, supering hives, adding and removing honeys supers (50+lbs) and carrying and stacking on the truck deck; extracting honey; moving hives; maintain bee yards and any other assorted apiary jobs that are required.

2 – Farm labourers: Students and others welcome. Wages: $15.00 per hour. (Employment period - July 15th – August 30th) This job Includes: harvesting (supering hives, pulling honeys supers (50+lbs) and carrying and stacking on the truck deck and extracting honey. Successful candidates may be required to assist in other apiary/farm tasks.

Requirements: No formal education required but at least a Grade 10 education would be an asset. Have valid driver's licence; have a vehicle to get back and forth to work. Experience driving a standard truck is an asset; to be in good physical condition and to be able to work in a team environment.

Please do not apply if you are allergic to bees!

Employment Details: Seasonal and full-time – Minimum of 35 hours per week.

Training is provided on a ongoing basis. Most tasks are performed outdoors in all kinds of weather, work is repetitive and physically demanding.

Work location: SW 14-46-17 W3, #3 Prince School Rd, Hamlet of Prince. The bee yards are located in the RM's of Meota, North Battleford, Turtle River, Round Hill, and Douglas.

Contact Cameron Brown, Phone: 306-386-7953. Mail or deliver your resume with references to: Farmer Brown's Honey, Site 4 Box 54 RR#3, North Battleford, SK S9A 2X4 or email to: **farmerbrownshoney@gmail.com**

Help Wanted: MacGregor (MB)

12 SEASONAL BEEKEEPERS (applications open to permanent residents or citizens of Canada only)

7 APIARY TECHNICIANS ($16.50-$18.00/hr),

6 APIARY WORKERS ($15.50-$16.50).

Expected employment duration is March 15/25 to Nov 15/25. Start/end dates are flexible due to the nature of the business. Valid drivers license an asset, previous work experience is necessary, technician min. 3 years, and work exp. is highly recommended for apiary worker. Candidates must be willing to work flexible hours in a fast paced, repetitive, and physically demanding environment. Duties include: assess/feed/medicate honeybee colonies, remove/extract honey, split/balance/move colonies, clean/collect pollen, build/repair hive equipment, and perform routine/light maintenance on machinery/vehicles.

TO APPLY, Nichol Honey Farm Ltd., Box 461, MacGregor, Mb., R0H0R0, phone 204-252-2770, or email: **nicholhoney@yahoo.ca**

Help Wanted: (AB)

Poelman Apiaries Ltd requires workers for 2025 Season

Fifteen APIARY TECHNICIANS (NOC 84120) with a minimum of 2-3 years (seasons) experience working on a Canadian style commercial apiary in the min. capacity of Apiary Worker or General Farm Worker with employment March thru November 2025 ($17.44-$21/hour depending on exp. with possible bonus) (40+ hours/week). Duties include: caring for honeybee colonies in the appropriate manner; coordinating the production of replacement bees and equipment; recognizing, reporting, monitoring hive health issues and applying appropriate treatment/controls;

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harvest and fill honey barrels and containers; supervise small teams of workers; driving and daily maintenance of vehicles; operate and maintain other apiary equipment; conduct bee yard maintenance; keep some field production records.

A motor vehicle operator's license with no serious infractions, recognized by the Province of Alberta and major insurance companies will be an asset.

Fifteen APIARY WORKERS (NOC 85100) with a minimum of 1 year (season) experience and with employment March thru October 2025 ($17.44-$20/hour depending on exp. with possible bonus) (40+ hours/week). Duties include caring for honeybee colonies in the appropriate manner; assisting Technicians with bees and equipment; assisting with harvesting honey; assisting with the bee yard and equipment maintenance.

All wages are negotiable based on experience and productivity. Applicants must be able to work in the presence of honey bees. All positions may require some evening, night & weekend work. All applicants must be in good physical condition and able to work in a team environment. Ability to speak English is an asset.

Help Wanted: Tees (AB)

2025 TEES BEES INC. requires:

Three APIARY TECHNICIANS (NOC 84120) with a minimum of 2-3 years (seasons) experience working on a Canadian style commercial apiary in the min. capacity of Apiary Worker or General Farm Worker with employment March thru October 2025 ($17.44-$21/hr depending on exp. with possible bonus) (40+ hrs/wk).

Duties include: caring for honeybee colonies in the appropriate manner; coordinating the production of replacement bees and equipment; recognizing, reporting, monitoring hive health issues and applying appropriate treatment/controls; harvest and fill honey barrels and containers; supervise small teams of workers; driving and daily maintenance of vehicles; operate and maintain other apiary equipment; conduct bee yard maintenance; keep some field production records.

A motor vehicle operator's licence with no serious infractions, recognized by the Province of Alberta and major insurance companies is required.

Nine APIARY WORKERS (NOC 85100) with a minimum of 1 year (season) experience and with employment March thru October 2025 ($17.44-$20/hr depending on exp. with possible bonus) (40+ hrs/wk).

Duties include caring for honeybee colonies in the appropriate manner; assisting Technicians with bees and equipment; assisting with harvesting honey; assisting with the bee yard and equipment maintenance.

All wages are negotiable based on experience and productivity. Applicants must be able to work in the presence of honey bees. All positions may require some evening, night & weekend work. All applicants must be in good physical condition and able to work in a team environment. Ability to speak English is an asset.

Contact Jeremy Olthof at 23318-Hwy 50, Tees, AB; mail to RR1, Tees, AB T0C 2N0; or email at **teesbeesinc@gmail.com**.

Help Wanted: Granum (AB)

SUPERNUC APIARIES located near Granum, AB (251032 TWP RD 104) has the following positions for the 2025 season. **APIARY WORKERS (NOC 8431) 3 positions**: starting at $17.98-$21.00/hr, needed full time (45+hrs/wk) from Mar 1, 2025 through October 31, 2025. Apiary workers must have a minimum of 1 season full time experience in a Canadian commercial apiary. Duties include assisting technicians with beehive maintenance and treatments, building and repairing bee equipment, moving hives, harvesting and extracting honey, and winter preparation. Some evening, night and weekend work will be required. Accommodations are available. A valid driver's license and the ability to speak English is an asset. Must be physically fit and accustomed to working with honeybees. No educational requirements. All wages are negotiable based on experience and productivity. Bonuses may be available. Email resumes to **aovinge@gmail.com** or mail to Box 133, Granum, AB T0L 1A0.c.

Help Wanted: Argyle (MB)

Grysiuk Apiary Inc. requires **11 full time seasonal apiarists** in Argyle,MB. wages are $15.80 - $18.00 per hour depending on experience(possible bonus) Job is physically demanding, must help with wrapping, feeding, making nucs, supering, pulling honey, honey extraction, medicating hives and winter preparation. Start date is March 1, 2025 November 15, 2025. Please apply by email: **acgrysiuk@shaw.ca** mail: 83 Acheson Dr., Winnipeg,MB. R2Y 2E8.

Help Wanted: Souris (MB)

HARLTON APIARIES has 4 Seasonal positions available for the 2025 Season

4 Apiary Workers (NOC 85100) for March or April to end of October 2025

Wages $15.80 - $18.00 per hour depending on experience. 1-2 years experience preferred. Operating a forklift, a valid driver's license and the ability to speak English is an asset. Duties include Handle, feed, and care for honeybee colonies, assist in the production of nucs, splits or replacement hives, Recognize and report hive health issues and apply appropriate treatments, move hives, supering hives, Collect and package honey and beeswax, Bee yard maintenance, Manufacture, assemble and maintain hive equipment, Operate and maintain other apiary related equipment, Spring and Winter preparation of hives, heavy lifting required.

Contact Irwin or Joan Harlton, Harlton Apiaries, Box 644 Souris (MB) R0K 2C0 204-483-2382, or email: **harltonapiaries@mymts.net**

Help Wanted: Spiritwood (SK)

Jewitt Honey Farm Apiary Labourers

2 Full-Time Seasonal Positions for 2025 May 1st – September 30th

Responsibilities will include but not limited to; assemble equipment, unwrapping hives, bee yard maintenance, moving hives, cleaning deadouts, cleaning extracting facility, painting, making nucs, supering hives, harvesting honey, extracting honey, feeding bees. Will be required to work some evenings and weekends, work is physically demanding with heavy lifting, cannot be allergic to bees, a valid SK driver's license would be an asset

$15.00-$16.50/hr. depending on experience, willing to train, potential to earn bonuses.

Apiary Labourers

2 Full-Time Seasonal Positions for 2025 May 15th – September 15th

Responsibilities will include but not limited to; assemble equipment, unwrapping hives, bee yard maintenance, moving hives, cleaning deadouts, cleaning extracting facility, painting, making nucs, supering hives, harvesting honey, extracting honey, feeding bees. Will be required to work some evenings and weekends, work is physically demanding with heavy lifting, cannot be allergic to bees, a valid SK driver's license would be an asset. $15.00-$16.00/hr. depending on experience, willing to train, potential to earn bonuses

To apply email resume to **jewitthoneyfarm@gmail.com** or mail resume to PO Box 969 Spiritwood, SK S0J 2M0

Help Wanted: Rocanville (SK)

Apiary Technicians and Workers wanted FOR SUMMER 2025!

APIARY TECHNICIAN (7 months)

6 seasonal positions available from March 21 - October 21 (2025).

Reporting to work at B. Strong Apiaries Ltd. 1 mile southwest of Rocanville, Sk. (NE 17-16-31 W1)

Wages dependent on experience ($17.00 - $22.00) Possible production bonus at end of the season. Duties include but are not limited to; Unwrapping/wrapping hives, colony manipulation, application of honeybee treatments, making nucs, supering, maintaining equipment and a clean shop, pulling and extraction of honey, moving and feeding hives, keeping accurate and up to date yard records, etc.

Requirements:

- Minimum of 2 years beekeeping experience.
- Must not be allergic to honeybee stings.
- The work is physically demanding, applicants must be in strong and active physical condition to maintain the safe work environment.
- Required long hours and occasional weekend/holiday work (minimum 40 hrs/wk).
- Must work well with others, and able to work long hours in the heat.
- Ability to speak English is an asset but not a requirement.

APIARY WORKER (6 months)

4 seasonal positions available from April 21 - October 21 (2025).

Reporting to work at B. Strong Apiaries Ltd. 1 mile southwest of Rocanville, Sk. (NE 17-16-31 W1)

Wages dependent on experience ($16.00 - $21.00) Possible production bonus at end of the season. Duties include but are not limited to; Assisting apiary technicians in

the unwrapping/wrapping of hives, colony manipulation, application of honey bee treatments, making nucs, supering, maintaining equipment and a clean shop, pulling and extraction of honey, moving and feeding hives, safely securing truckloads of honey/equipment, etc.

Requirements:
- Must not be allergic to honeybee stings.
- The work is physically demanding, applicants must be in strong and active physical condition to maintain the safe work environment.
- Required long hours and occasional weekend/holiday work (minimum 40 hrs/wk).
- Must work well with others, and able to work long hours in the heat.
- Ability to speak English is an asset but not a requirement.

APIARY WORKER (3 months)

6 seasonal positions available from July 3rd - September 15 (2025).

Reporting to work at B. Strong Apiaries Ltd. 1 mile southwest of Rocanville, Sk. (NE 17-16-31 W1)

Wages dependent on experience ($16.00 - $21.00) Possible production bonus at end of the season. Duties include but are not limited to; Cleaning warehouse at start of season. Daily upkeep and maintenance of extracting area/honey house, extraction of honey, cleanup after extraction season, painting of honey supers, painting and other general upkeep of the honeyhouse. etc.

Requirements:
- Must not be allergic to honeybee stings.
- Required long hours and occasional weekend/holiday work (minimum 40 hrs/wk).
- Must work well with others, and able to work long hours in the heat.
- Ability to speak English is an asset but not a requirement.

Contact Lance Strong. Phone: 306-434-8283

Help Wanted: Roblin (MB) 2025

3012352 Manitoba Ltd. o/a Wendell Honey, Box 1439, Roblin, MB R0L 1P0

Reporting to work at Wendell Honey, one-mile East of MacNutt, Saskatchewan.

Transportation provided from there to various bee yards.

18 Full Time Positions available at Wendell Honey in 2025

APIARIST TECHNICIAN (NOC 84120)
- help with Spring check, hive assessment and manipulation.
- help with pest and disease control.
- help with grafting, making nucs, and raising queens.
- assemble equipment.
- help super hives.
- help harvest honey.
- help keep field production records.
- help maintain bee yards.
- help with Fall feeding, assessment and treatments.
- help to wrap bees.
- team lead/supervise as required
- other duties as assigned

- Positions available from April 8, 2025 to mid-October 2025
- Min. 2 years of experience working with bees necessary.
- Work is physically demanding.
- Wages $17.00 -$28.00 per hour depending on experience
- Possible production bonus.

Email Ashley Chamberlain **jobswendellhoney@gmail.com** or phone 204-564-2599.

15 Full Time Positions available at Wendell Honey 2025

Apiary Worker (NOC 85100) to
- assemble equipment.
- help super hives.
- help harvest honey.
- help maintain bee yards.
- help with Fall feeding.
- help to wrap bees.

- Positions available from May 15, 2024 to mid-September 2024
- No experience required.
- Work is physically demanding.
- Wages $15.00 - $20.00 per hour depending on experience
- Possible production bonus.

Email Ashley Chamberlain **jobswendellhoney@gmail.com** or phone 204-564-2599.

Help Wanted: Nipawin, (SK) 2025

Contact YVES GAREZ. Phone: 306-862-7700

Yves Garez Honey Inc, P.O Box 2016, Nipawin, SK, S0E 1E0 seeks employees for the March 2025 to October 2025 season at facilities located 10 km North-East of Nipawin, Saskatchewan. Good work ethics, health and stamina essential, good physical condition required for hard work, heavy lifting, long days including some weekends. Those allergic to bee stings and work need not apply.

3 Apiary Supervisors (NOC 82030) with 5 years experience in handling bee hives. Duties includes unpacking and packing, checking, feeding, medicating, cleaning, moving, splitting, supering, raising queens, as well as harvesting and extracting honey, keeping records, supervising other employees. Valid driver's license required. Wages $ 22.00 to $ 30.00 per hour, depending on experience.

8 Apiary Technicians (NOC 84120) with minimum 2 years experience working with bees. Valid driver's license required. Wages $ 17.00 to $ 22.00 per hour.

4 Apiary Workers (NOC 85100) No experience required. We will train successful applicants in Honeybees and Hive manipulation. Wage start at $ 16.00 per hour.

Help Wanted: East of Saskatoon (SK)

Meadow Ridge Enterprises Ltd requires help for the 2025 beekeeping season. The contract term is from April 15th to October 31st 2025. Meadow Ridge Ent Ltd is a commercial beekeeping and queen-rearing operation located 10 miles east of Saskatoon, NW 33 TP 36 RG 3 W 3rd in the RM of Blucher.

Apiary Technicians (NOC 8431): Minimum 1-2 years of beekeeping experience required.

Wage $15.00 - $17.00 depending on experience. Potential to earn bonuses. 3 positions to fill. Seasonal full-time(40 hr+/wk). Duties include spring/fall feeding, unwrapping/wrapping hives, monitoring hive health, assisting in all aspects of queen rearing, and commercial honey harvesting. Fixing and building bee equipment, upkeep of bee sites, and maintenance of work vehicles.

Apiary Supervisors (NOC 8252): Minimum 3-4 years of beekeeping experience.

Wage $18.00 - $21.00 depending on experience. Potential to earn bonuses. 2 positions to fill. Seasonal full-time (40 hr+/wk). Duties include spring/fall feeding, unwrapping/wrapping hives, moving hives, monitoring hive health, assisting in all aspects of queen rearing, and commercial honey harvesting/extraction. Keeping daily records, supervising other employees, fixing and building bee equipment, upkeep of bee sites, and maintenance of work vehicles. A valid Driver's license is required.

All applicants must be able to work with honeybees and not be allergic to bee stings. Will work in all kinds of weather, a repetitive and physical job that will require heavy lifting, reaching, crouching, and standing. Being in good physical condition is required. Contact: Albert J Robertson. Phone: 306.373.9140

Please apply by email to **a.j.robertson@sasktel.net**

Help Wanted: Kinistino (SK)

Apiary Harvest Labourers B's Bee Ranch Inc.

Two Apiary Harvest Labourer positions available for up to 8 months (starting no earlier than March) required for the 2025 season. Labourers perform (but are not limited to) tasks such as assisting with supering hives, harvesting honey, cleaning honey extraction and storage equipment; barrel filling and moving; repair, assemble and maintain hive equipment and bee equipment; bee yard maintenance.

Availability to work long hours, evenings/nights, holidays and weekends is required. Work is faced paced and physically demanding with heavy lifting. Must be able to work in all weather conditions. Knowledge of the industry, a valid driver's licence and English-speaking skills an asset but not mandatory. Wage starts at $15.00/hr with subsidized housing option and transportation. Potential for bonuses based on performance, attitude and character. Interested applicants can email a resume and cover letter with references to B's Bee Ranch Inc at **beeranch@sasktel.net**

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Help Wanted: Kinistino (SK)

Apiary Harvest Workers B's Bee Ranch Inc.

Three Apiary Harvest worker positions available for up to 8 months (starting no earlier than March) required for the 2025 season. Apiary Workers perform (but are not limited to) tasks such as supering hives, harvesting honey, cleaning honey extraction and storage equipment; barrel filling and moving; repair, assemble and maintain hive equipment and bee equipment; bee yard maintenance; assist with colony manipulation; assist with colony treatments; assist with moving colonies; assist with feeding colonies. Availability to work long hours, evenings/nights, holidays and weekends is required. Work is faced paced and physically demanding with heavy lifting. Must be able to work in all weather conditions.

Canadian beekeeping industry knowledge, 12 months experience in Canada, valid driver's licence and English skills required. Wage starts at $16.00/hr - $18.00/hr (depending on years of Canadian experience) with subsidized housing option and transportation. Potential for bonuses based on performance, attitude and character. Interested applicants can email a resume and cover letter with references to B's Bee Ranch Inc at **beeranch@sasktel.net**

Help Wanted: Kinistino (SK)

Apiary Harvest Labourer Position 1, Bacon Apiaries Ltd, located at 102 Ruttle Avenue in Kinistino, Sk., requires six honey harvest labourers for the upcoming 2025 crop season for extracting honey. Job duties include transporting full supers to extracting room, using an automatic lift to place full honey supers on a conveyor, running honey frames through an uncapper, moving frames into an extractor, removing empty frames from the extractor and putting them into supers, stacking supers away, assembling new honey equipment and repairing existing honey equipment.

The average work day is 6-12 hours or roughly 30-60 hours per week with wages starting at 15.00/hr to $18.00/hr depending on experience. Subsidized housing is available. Potential to earn bonuses based on production and performance. The employment term is from June 25th, 2025 to September 25th, 2025.

To apply for this position, e-mail resume to **dionebacon13@sasktel.net**

Apiary Harvest Labourer Position 2, Bacon Apiaries Ltd., located at 102 Ruttle Avenue in Kinistino, Sk., is seeking up to two full-time employees to fill the seasonal positions of Apiary Harvest Labourer for the 2025 crop year. The position consists of work with honeybees. Duties primarily include, but are not limited to assisting with, moving colonies out of and into the wintering facility, feeding and medicating colonies, evaluation and development of colony strength, building and repairing of equipment, harvesting of honey supers, extracting and storing honey, and colony location maintenance.

The successful applicants need no experience to fill these positions, must be able to work outdoors in variable weather conditions, work well with other employees, work in a fast paced and physically demanding environment, and be able to work evenings and weekends when it is deemed necessary. The average work day is 6-12 hours or roughly 30-60 hours per week. Wage shall begin at $15.00. Subsidized housing is available. Potential to earn bonuses based on production and performance. The position is for a term of approximately 7 to 8 months beginning no earlier than March 15th, 2025 and ending no later than November 15th, 2025. No experience required to fill these positions.

To apply for this position, e-mail resume to **dionebacon13@sasktel.net**

Help Wanted: Kinistino (SK)

Apiary Harvest Labourers, Baconian Bee Farm Ltd., located at 102 Ruttle Avenue in Kinistino, Sk., is seeking up to two full-time employees to fill the seasonal positions of Apiary Harvest Labourer for the 2025 crop year. The position consists of work with honeybees. Duties primarily include, but are not limited to assisting with, moving colonies out of and into the wintering facility, feeding and medicating colonies, evaluation and development of colony strength, building and repairing of equipment, harvesting of honey supers, extracting and storing honey, and colony location maintenance.

The successful applicants need no experience to fill these positions, must be able to work outdoors in variable weather conditions, work well with other employees, work in a fast paced and physically demanding environment, and be able to work evenings and weekends when it is deemed necessary. The average work day is 6-12 hours or roughly 30-60 hours per week. Wage shall begin at $15.00/hour.

Subsidized housing is available. Potential to earn bonuses based on production and performance. The position is for a term of approximately 7 to 8 months beginning no earlier than March 15, 2025 and ending no later than November 15, 2025. No experience required to fill these positions.

To apply for this position, e-mail resume (English only) with subject line 'Work in Canada' to **dionebacon13@sasktel.net**

Apiary Harvest Workers/Technicians, Baconian Bee Farm Ltd., located at 102 Ruttle Avenue in Kinistino, Sk., is seeking up to three full-time employees to fill the seasonal positions of Apiary Worker for the 2025 crop year. The position consists of work with honeybees. Duties primarily include, but are not limited to assisting with, moving colonies out of and into the wintering facility, feeding and medicating colonies, evaluation and development of colony strength, building and repairing of equipment, harvesting of honey supers, extracting and storing honey, and colony location maintenance.

The successful applicants must have a minimum of two years' experience in the industry, be able to work outdoors, work well with other employees, work in a fast paced and physically demanding environment, and be able to work evenings and weekends when it is deemed necessary. The average work day is 6-12 hours or roughly 30-60 hours per week. Wages shall begin at $16.00/hour up to $20.00/hour depending on years of experience in the beekeeping industry. Subsidized housing is available. Potential to earn bonuses based on production and performance. The position is for a term of approximately 7 to 8 months beginning no earlier than March 15, 2025 and ending no later than

November 15, 2025. To apply for this position, e-mail resume (English only) with subject line 'Work in Canada' to **dionebacon13@sasktel.net**

Help Wanted: Langenburg and Esterhazy (SK)

Job Openings For Glory Bee Honey Farms (101034244 SK LTD) – 2025 Located in Langenburg and Esterhazy, SK Glory Bee Honey has job openings for **Apiary Technicians, Apiary Technician Assistants**. These positions are available for fulltime (35+hrs/week) from April-October for the 2025 season. Also available is Honey Harvest labourer/General farm worker positions which is 2-3 months starting July-Sept for 2025.

10 Apiary Technicians (6-8 month position)

2-3 yrs experience necessary to apply.

Jobs include:

Help with spring check, do hive assessment and manipulation; Help with pest and disease control; Help with grafting, building and looking after nucs; Help queens raise; Help with harvest; Help to apply medication and treatments; *Lifting is required.

Wages- $20.00-$27.00/hr depending on experience

20 Apiary Technician Assistants (6 month position)

Jobs Include:

Help apiary technicians; Assemble equipment; Help super hives; Help harvest honey; Help keep field production records; Help maintain bee yards; Help with fall feeding, assessment and treatments; Help to wrap bees; *Lifting is required.

Wages $15.00-$20.00 depending on experience

10 Honey Harvest Labourers (2-3 month position)

To help with harvest and extraction of honey. Work in the bee yards pulling honey. Work in the extraction plant. Clean honey harvest equipment. No experience necessary will train on the job. *Lifting is required

Wages starting at $15.00-19.00/hr depending on experience

Positions available from April 15, 2025 to October 31st 2025.

Applicants must be physically and mentally fit to work outdoors and with bees.

To apply please email resume and references to:
glorybeehoneyfarms@gmail.com for more information.

Proud sponsor of the Canadian Honey Council

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The Canadian Honey Council is the national association of beekeepers representing apiculturists across Canada. The CHC provides a forum where producers, packers, professionals, provincial associations and officials from different levels of government can talk and recommend action in the best interests of the Canadian honey bee industry. Currently, the CHC membership consists of representatives of provincial associations with the total number of beekeepers at approximately 13,000 managing over 810,000 colonies.