

The Novel Food Regulation: A Major Obstacle to Sustainability in the Coffee Industry [†]

Dirk W. Lachenmeier *  and Stephan G. Walch 

Chemisches und Veterinäruntersuchungsamt (CVUA) Karlsruhe, Weissenburger Strasse 3, 76187 Karlsruhe, Germany; stephan.walch@cvauka.bwl.de

* Correspondence: lachenmeier@web.de

[†] Presented at the International Coffee Convention 2023, Mannheim, Germany, 30 September–3 October 2023.

Abstract: The global shortage of agricultural source products and the rising need for sustainability in supply chains have led to an effort to replace current sources, such as those for energy or protein, with novel foods. These include by-products from agricultural production that are currently being wasted or completely new plant or insect sources. Unfortunately, the novel food regulation of the European Union (EU) creates a hindrance to rapidly adjusting in times of crisis, and it particularly poses an unfair barrier against traditional foods from third countries. These might include some agricultural coffee by-products or the use of silverskin as a coffee roasting by-product. This presentation argues that the novel food regulation creates a significant trade barrier for applying novel foods, such as coffee by-products, to replace sources affected by current crises, like grains from Ukraine, or to improve sustainability in the industry at large. Furthermore, it is suggested that the approval requirements for traditional foods of third countries are overly strict and do not consider the practical realities of an agricultural food product. In conclusion, it is necessary to revise the EU novel food regulation to eliminate these barriers and allow a rapid and flexible introduction of novel foods. This should include traditional foods from third countries. Such a revision would assist in upholding food security and sustainability in the EU.

Keywords: novel food; sustainability; alternative food source; traditional foods; coffee by-products



Citation: Lachenmeier, D.W.; Walch, S.G. The Novel Food Regulation: A Major Obstacle to Sustainability in the Coffee Industry. *Proceedings* **2023**, *89*, 8. <https://doi.org/10.3390/ICC2023-14840>

Academic Editor: Steffen Schwarz

Published: 15 August 2023



Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

The coffee industry faces both challenges and opportunities in the quest for sustainability [1]. Amidst global supply chain disruptions caused by events such as the COVID-19 pandemic and geopolitical conflicts, finding innovative sources for food ingredients is crucial [2]. Coffee by-products, which are often wasted despite their nutritional value, could play a significant role in enhancing food security and reducing waste [3]. However, the EU's novel food regulation [4] has presented unexpected barriers to harnessing this potential, thereby hindering sustainability efforts in the coffee sector [5].

2. Coffee By-Products as a Solution

Coffee by-products, such as coffee leaves, cherry materials, and silverskin, have demonstrated their nutritional value and versatility [6]. These by-products can be used in various applications, from providing essential nutrients to acting as substitutes for conventional ingredients in baked goods, meat products, and more [3]. The focus on sustainability and reducing waste in the food industry makes these by-products highly attractive, but their utilization is restricted by the current regulatory framework.

3. Regulatory Challenges

The EU's novel food regulation, while intended to ensure consumer safety and promote innovation in the food industry, has inadvertently posed a significant obstacle

to increasing sustainability in the coffee industry through the marketing of coffee by-products [3,5]. One crucial aspect contributing to this obstacle is the limited number of coffee by-products that has gained novel food authorization from the EU Commission, with only a few products, such as the infusion from coffee leaves and cascara, falling under this category [7].

The problem with the current authorization for these two coffee by-products lies in its basis on traditional use in third countries. The authorization granted is specific to the exact details of traditional use, which means that coffee leaves and coffee cherry pulp, for instance, can only be used to prepare beverages and not as ingredients in other food products like bread to increase protein content. For such uses, a separate full novel food application procedure is necessary, an effort that no food business operator has currently made.

This limitation significantly restricts the potential of coffee by-products to contribute to sustainability in the food industry. When innovative uses of these by-products are considered, such as incorporating them into various food products to maximize their nutritional value and reduce waste, the current regulatory framework becomes a hindrance. The inability to flexibly utilize coffee by-products as versatile ingredients in different food applications limits their economic viability and ultimately obstructs efforts to enhance food security and reduce waste within the coffee industry.

To truly leverage the sustainability potential of coffee by-products, a more flexible and adaptable approach within the novel food regulation is required. This should involve re-evaluating the authorization process to allow for broader usage of by-products, enabling them, e.g., to contribute to increasing protein content in bread and other food items, while maintaining a focus on safety (e.g., by restricting caffeine intake).

No authorizations have been applied so far for coffee flowers, parchment, or coffee silverskin [7].

4. A Call for Revision

To fully unlock the sustainability potential within the coffee industry, a revision of the EU's novel food regulation is essential. The authors propose several key changes:

Flexible Approval Process: An adaptive approval process that considers the unique characteristics of traditional foods from third countries, allowing not only for exceptions during emergencies and crisis situations but also for staple products that have been used by humans for decades [3,5].

Equivalence of Traditional Foods: Traditional foods from third countries should not be bound by overly restrictive categorizations but rather treated as equivalents to traditional foods within EU countries, fostering fair competition [3,5].

Balancing Safety and Innovation: Striking the right balance between safety and innovation, recognizing that the responsibility for food safety lies with manufacturers, whether the food is novel or traditional [3,5].

5. Conclusions

The coffee industry's sustainability efforts are impeded by the current rigidity of the EU's novel food regulation. By focusing on the case of coffee by-products, this paper has highlighted the need for a more adaptive and forward-thinking regulatory approach. Embracing innovative sources of nutrition and fostering sustainable practices should be the shared goal. A revised regulation that promotes both food safety and sustainability can position the coffee industry and other sectors for a brighter, more sustainable future.

Author Contributions: Conceptualization, D.W.L.; writing—original draft preparation, D.W.L.; writing—review and editing, S.G.W. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Bianco, G.B. Climate change adaptation, coffee, and corporate social responsibility: Challenges and opportunities. *Int. J. Corp. Soc. Responsib.* **2020**, *5*, 3. [[CrossRef](#)]
2. Hadachek, J.; Ma, M.; Sexton, R.J. Market structure and resilience of food supply chains under extreme events. *Am. J. Agric. Econ.* **2023**, 1–24. [[CrossRef](#)]
3. Lachenmeier, D.W.; Walch, S.G. Do we need urgent revision of the novel food law in the European Union to ensure food security in times of global supply shortages? *Lebensmittelchemie* **2023**, *77*, 22–26. [[CrossRef](#)]
4. European Union. European Union Regulation (EU) 2015/2283 of the European parliament and of the council of 25 November 2015 on novel foods, amending Regulation (EU) No 1169/2011 of the European Parliament and of the Council and repealing Regulation (EC) No 258/97 of the European Parliament and of the Council and Commission Regulation (EC) No 1852/2001. *Off. J. Eur. Union* **2015**, L327, 1–22.
5. Lachenmeier, D.W.; Walch, S.G. Lifestyle-Produkte statt Lebensmittel. *Nachr. Chem.* **2023**, *71*, 36–38. [[CrossRef](#)]
6. Klingel, T.; Kremer, J.I.; Gottstein, V.; Rajcic de Rezende, T.; Schwarz, S.; Lachenmeier, D.W. A review of coffee by-products including leaf, flower, cherry, husk, silver skin, and spent grounds as novel foods within the European Union. *Foods* **2020**, *9*, 665. [[CrossRef](#)] [[PubMed](#)]
7. Lachenmeier, D.W.; Rajcic de Rezende, T.; Schwarz, S. An update on sustainable valorization of coffee by-products as novel foods within the European Union. *Biol. Life Sci. Forum* **2021**, *6*, 37. [[CrossRef](#)]

Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.