

POSITION PAPER: Pesticides and Parkinson's

A call to preserve the periodic reassessments of pesticides

Executive Summary - October 2026

Parkinson's Europe calls on the European Parliament and Council to preserve mandatory, periodic scientific reassessment of active substances used in plant protection products, including pesticides, by rejecting or amending proposal 2025/0410(COD).

Exposure to pesticides is linked with increased risk of developing Parkinson's, a progressive incurable long term neurodegenerative condition. Every year more people are diagnosed with Parkinson's, also costing the European health system an estimated €22.8 billion annually,¹ a figure that will continue to rise unless action is taken to prevent Parkinson's.

Several EU Member States have already recognized pesticide-induced Parkinson's for farmers as an occupational disease.

Mandatory periodic safety reassessments of pesticides are critical to include new emerging scientific data, especially since neurological outcomes of certain pesticides can manifest long after their approval and use.

Under the precautionary principle, EU treaties and case law require robust safety procedures for pesticide approvals to be valid. Proposal 2025/0410 will replace the set periodic reviews with unlimited approval periods and ad-hoc discretionary reviews. This means approved pesticides will be deemed safe indefinitely unless proven otherwise, violating the precautionary principle and removing any incentive for chemical companies to reassess their products as new science emerges.

Such a system cannot safeguard human health as effectively as the current periodic framework. The EU must retain its leadership in high environmental and health standards; Parkinson's Europe urges policymakers to reject proposal 2025/0410 accordingly.

Parkinson's Europe Policy Recommendations

Parkinson's Europe firmly maintains that the safest course of action for European citizens and the agricultural community is the **complete rejection of Proposal 2025/0410(COD)**.

If the European Parliament proceeds with amending the text rather than rejecting it outright, MEPs should introduce and support the following **non-negotiable safeguards** to protect public health:

- **Maintain the 10-year maximum approval limit:** Reject any transition to unlimited approval periods or longer approval periods. Short, fixed timelines are essential to capture emerging scientific data on long-term neurotoxicity.
- **Enforce mandatory periodic reassessments:** Ensure every active substance is automatically reassessed at fixed legal intervals. Reassessments must not depend on the political or administrative discretion of the European Commission or Member States.
- **Establish objective safety triggers for immediate review:** Mandate automatic, immediate safety reviews whenever independent evidence emerges regarding chronic diseases, neurodegenerative effects, occupational exposure, or environmental persistence.
- **Preserve a comprehensive, independent evidence base:** Guarantee that peer-reviewed literature, epidemiological studies, monitoring data, and national occupational-disease findings are legally mandated components of all risk assessments.
- **Enshrine human and occupational health as the primary legal priority:** Ensure that human health—specifically regarding long-latency and chronic outcomes—remains the overriding, determining factor in all pesticide approvals, renewals, and derogations.
- **Resolve backlogs through resourcing, not deregulation:** Address administrative delays by increasing the budget, authority, and personnel of the European Food Safety Authority (EFSA) and national competent authorities, rather than dismantling safety mechanisms.

Background, Evidence and Rationale

1. Research Associates Pesticides Exposure with Increased Risk of Parkinson's

Parkinson's affects physical movement, mental health, independence, and overall quality of life. **Parkinson's is the fastest growing neurological disease in the world;** global

prevalence has nearly doubled since 1990, and an estimated 25.2 million people will be affected by 2050.²

A substantial body of research associates pesticide exposure—particularly occupational exposure—with an increased risk of developing Parkinson's. This risk rises with intensity and duration of exposure, making it a significant threat for farmers and agricultural workers.^{3,4,5} While the strength of evidence varies across substances and exposure patterns, regulatory systems must be equipped to respond quickly when evidence of harm emerges. This is especially vital for neurological health, as several pesticides have already been found to exhibit severe neurotoxic effects.⁶ Significant scientific evidence linking plant protection products to Parkinson's justifies a highly robust approach to safety regulations.

2. Pesticide-induced Parkinson's Is Recognized As An Occupational Disease For Farmers By National Authorities

In France,⁷ Italy⁸ and Germany⁹, Parkinson's is formally recognized as an occupational disease caused by pesticide exposure among agricultural workers, enabling affected farmers to claim compensation and support. These national measures demonstrate that Member State experts treat the relationship between pesticide exposure and Parkinson's as a serious occupational health issue.

EU-level action is now required to effectively address these environmental causes. Weakening regulatory oversight does not reduce costs; it simply transfers an enormous financial burden¹⁰ onto publicly funded social and healthcare systems, while inflicting an incalculable human cost on patients and their families.

3. Evidence Linking Pesticides Exposure And Parkinson's Emerges Only Over Years

Assessing the long-term impacts of pesticides on neurodegenerative health is a challenge for regulatory systems, yet agricultural workers face regular, significant exposure. Globally, **46% of farmers experience acute pesticide poisoning each year**¹¹. Unlike acute poisoning, which presents rapidly and allows regulators to adjust immediate exposure limits, Parkinson's is a progressive condition. Clinical symptoms appear gradually and worsen over time as brain damage advances.¹²

Consequently, critical evidence linking a pesticide to Parkinson's often emerges only years or decades after the substance has been approved and widely used, and pesticides residues can linger in the environment for years.

The current safety screening procedures already fail to consider all long-term neurological outcomes of pesticides. Instead of worsening such a safety system, the EU should consider how to strengthen it. Advances in research methodologies, assessment tools, and Member State initiatives¹³ are rapidly evolving our understanding of pesticide-induced neurotoxicity. Public health regulatory systems must remain equipped to identify, evaluate, include and act on this evolving evidence swiftly.

4. The Current system requires Time-Bound Periodic Renewals for a reason

The current EU regulatory system recognizes the need to incorporate new emerging evidence by requiring periodic risk assessments for pesticides. It places strict time limits on the approvals of active substances. To enter the market, an active substance must fulfill the criteria laid out in Article 4. The first approval cannot exceed 10 years. Under Article 14, a subsequent renewal is limited to a maximum of 15 years. Crucially, shorter approval periods and restrictions can be imposed whenever safety concerns arise. This mandatory cycle is a vital safety mechanism: it acknowledges that our understanding of how pesticides impact health and the environment evolves over time.

5. Proposal 2025/0410(COD) Creates An Unbalanced System To The Detriment Of Health Protection

Part of the European Commission's "simplification" agenda, the "Omnibus X" legislative package includes **Proposal 2025/0410(COD)**. While intended to eliminate inconsequential administrative burdens, periodic pesticide renewals are not a trivial procedure. If passed in its current form, this proposal will strip away critical human health safeguards through two dangerous mechanisms:

A. There's a Shift to Unlimited Approvals

The proposal amends **Article 5** of Regulation 1107/2009 to make nearly all first approvals of active substances unlimited. Substances that have already undergone one or two approval cycles will likewise receive indefinite approval.

- **Freezing the Scientific Evidence:** An unlimited approval freezes a substance's evidence base at the date of its most recent assessment. Because science progresses regardless of regulatory timelines, these approvals will lose their effectiveness as safety indicators.

- **Market Disincentives:** Farmers will no longer be able to rely on these approvals to decide which pesticides are truly safe to use. Furthermore, ending mandatory expiration dates removes any incentive for chemical producers to voluntarily withdraw products they suspect might fail updated safety assessments, allowing potentially dangerous substances to remain in use much longer than under the current system.

B. Systematic Oversight is replaced by "Discretionary Reviews"

In place of systematic renewals executed by experts in national food safety authorities and EFSA, the proposal shifts risk management entirely to the European Commission. Active substances will only face re-evaluation if they are explicitly named in a work programme created periodically by the Commission.

- This mechanism is not new; it currently exists under Article 18 of Regulation 1107/2009, but only as an exceptional tool to address emergency risks before an approval expires. Proposal 2025/0410 dangerously turns Article 18 into the primary re-approval mechanism.
- **The proposal grants the Commission vast flexibility:** there is no timeline for publishing work programmes, nor any limit on how much time can pass between reviews. A substance could go decades without reassessment. Human health would depend entirely on political will to trigger a review, shifting the burden of proof away from industry and onto publicly funded researchers and public authorities¹⁴.
- **Valid Evidence could be excluded:** The proposal allows the Commission to restrict what types of evidence are considered during ad-hoc reviews. Restricting relevant independent scientific literature is deeply concerning and risks repeating past regulatory failures that have been overturned by EU courts.

6. The Proposal goes against the Precautionary Principle

The precautionary principle is not a flexible guideline; it is a binding legal requirement under Article 191 of the Treaty on the Functioning of the European Union (TFEU). It dictates that *if an action or policy might cause harm to the public or environment, and scientific consensus is absent, the action should not be carried out* ¹⁶. EU Courts have firmly established that pesticide approval procedures must be robust and comprehensive to be legally valid. The danger of bypassing this principle is demonstrated by clear legal precedent:

- **The 2007 Paraquat Ruling:** Following a three-year legal battle, the European Court of First Instance annulled a 2003 Directive that had approved the herbicide **Paraquat**

for EU use¹⁵. The Court rescinded the approval because the Commission failed to evaluate scientific evidence linking Paraquat to neurotoxic effects and Parkinson's disease. The approval was overturned because the regulatory procedure was inadequate and violated the precautionary principle.

- **Validation by Modern Science:** The Court's decision was vital for public health. While the Commission initially argued Paraquat posed no significant risk, the substance remains in use in countries outside the EU, like the USA. Subsequent independent research has validated the court's precaution, revealing significantly higher rates of Parkinson's disease among workers handling Paraquat and residents living near treated fields¹⁷. Without the precautionary principle, Paraquat use would have continued in Europe.

Proposal 2025/0410(COD) builds a regulatory system that presumes a substance is safe indefinitely until proven otherwise. This will not improve regulatory certainty or efficiency. If resulting approvals face legal doubts, it will trigger litigation and recreate the exact legal uncertainty that Regulation 1107/2009 was enacted to fix.

7. Human Health is explicitly deprioritized

Parkinson's Europe acknowledges that approval backlogs cause operational difficulties for pesticide manufacturers and agriculture. However, rather than adequately resourcing the **European Food Safety Authority (EFSA)**, **Proposal 2025/0410** attempts to clear administrative backlogs by dismantling essential safety mechanisms. This directly jeopardises EU ambitions for sustainable food systems and occupational safety. We regret that the Commission did not issue a health impact assessment of the proposal, and that the European Parliament SANT Committee was not involved.

Alarmingly, the **European Parliament's** draft report suggests amendments that would:

- Exclude any data or scientific evidence not formally listed in the Commission's work programmes from reassessments.
- Ease derogations based on incomplete data.
- Lower safety requirements for "minor uses."
- Explicitly deprioritise human health as a determining factor in pesticide risk assessments.

Undermining these regulations fails to protect the farming community. Because farmers and agricultural workers face the highest direct exposure, deprioritising health risks their lives first and foremost.

CONCLUSION

Proposal 2025/0410(COD) represents a dangerous step backward for European public health. By dismantling predictable, mandatory safety reviews in favour of a discretionary system, it strips away protection from those most at risk—our agricultural workers and farming communities. Parkinson's Europe calls on Members of the European Parliament to uphold the Precautionary Principle, reject this deregulation, and ensure that human health remains the absolute legal priority in pesticide oversight.

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References:

1. Welter, L., Kruse, C., Montes-Martinez, M., Boon, P., Bassetti, C., Berger, T., Moro, E., Konti, M., Lolic, M., Tessitore, A., Hursey, A., Arvandi, M., Mühlberger, N., Siebert, U., Dodel, R. and Deuschl, G. (2026), The Costs of Parkinson's Disease in Europe: Results of the Costs of Illness in Neurology Initiative. *Mov Disord.* <https://doi.org/10.1002/mds.70491>
2. Su D, Cui Y, He C, Yin P, Bai R, Zhu J et al. Projections for prevalence of Parkinson's disease and its driving factors in 195 countries and territories to 2050: modelling study of Global Burden of Disease Study 2021 *BMJ* 2025; 388 :e080952 <https://doi.org/10.1136/bmj-2024-080952>
3. Gunnarsson LG, Bodin L. Parkinson's disease and occupational exposures: a systematic literature review and meta-analyses. *Scand J Work Environ Health.* 2017 May 1;43(3):197-209. doi: 10.5271/sjweh.3641. Epub 2017 Apr 5. PMID: 28379585. <https://doi.org/10.5271/sjweh.3641>
4. Jiménez-Jiménez, F.J., Mateo, D. and Giménez-Roldán, S. (1992), Exposure to well water and pesticides in Parkinson's disease: A case-control study in the Madrid area. *Mov. Disord.*, 7: 149-152. <https://doi.org/10.1002/mds.870070209>
5. Höllerhage M. Pesticides and parkinson's disease: causal relationship at the population and individual level? *J Neural Transm (Vienna).* 2026 Feb;133(2):229-264. Epub 2025 Nov 12. PMID: 41222711; PMCID: PMC12855454. <https://doi.org/10.1007/s00702-025-03054-3>
6. Leslie Amaral, Márcia Martins, Manuela Côrte-Real, Tiago F. Outeiro, Susana R. Chaves, António Rego, The neurotoxicity of pesticides: Implications for Parkinson's disease, *Chemosphere*, Volume 377, 2025,144348,ISSN 0045-6535, <https://doi.org/10.1016/j.chemosphere.2025.144348>.
7. Maladie de Parkinson provoquée par les pesticides. Tableaux des maladies professionnelles. Régime agricole tableau 58: <https://www.inrs.fr/publications/bdd/mp/tableau.html?refINRS=RA%2058>

8. Circolare Inail n. 7 del 15 febbraio 2024. Revisione delle tabelle delle malattie professionali nell'industria e nell'agricoltura. Decreto interministeriale 10 ottobre 2023:
<https://www.inail.it/portale/it/atti-e-documenti/note-provvedimenti-e-istruzioni-operative/normativa-circolari-inail/dettaglio.2024.02.circolare-n-7-15-febbraio-2024.html>
9. Berufskrankheiten-Verordnung vom 31. Oktober 1997 (BGBl. I S. 2623), die zuletzt durch Artikel 1 der Verordnung vom 16. Juli 2026 (BGBl. 2026 I Nr. 210) geändert worden ist:
<https://www.gesetze-im-internet.de/bkv/BJNR262300997.html>
10. Chaudhuri, K.R., Azulay, JP., Odin, P. et al. Economic Burden of Parkinson's Disease: A Multinational, Real-World, Cost-of-Illness Study. *Drugs - Real World Outcomes* 11, 1–11 (2024).
<https://doi.org/10.1007/s40801-023-00410-1>
11. Boedeker W, Watts M, Clausen P and Marquez E (2026) Worldwide unintentional acute pesticide poisonings: reassessing the occupational and non-occupational burden. *Front. Public Health* 14:1825899. <https://l1nq.com/cu5oy2p>
12. Ronald B. Postuma MD, MSc. Et al. (2015) MDS Clinical Diagnostic Criteria for Parkinson's Disease. *Movement Disorders*. Vol 30. Issue 12. <https://doi.org/10.1002/mds.26424>
13. National Institute for Public Health and the Environment. Ministry of Health, Welfare and Sport. Netherlands: Ongoing project (as of 2026) - studies into pesticides and health effects:
<https://www.rivm.nl/en/pesticides-health-effects> (accessed September 2026).
14. Backhaus, T., van den Brink, N.W., van den Brink, P.J. et al. Periodic reassessment or permanent approval? A critical analysis of the EU Commission's proposal to reform pesticide and biocide authorisation in Europe. *Environ Sci Eur* 38, 173 (2026).
<https://doi.org/10.1186/s12302-026-01514-5>
15. Judgment of the Court of First Instance (Second Chamber, extended composition) of 11 July 2007. Kingdom of Sweden v Commission of the European Communities. Directive 91/414/EEC - Plant protection products - Paraquat as an active substance - Marketing authorisation - Authorisation procedure - Protection of human and animal health. Case T-229/04.
16. Communication from the Commission on the Precautionary Principle. COM/2000/0001:
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52000DC0001>
17. Kimberly C Paul, Myles Cockburn, Yufan Gong, Jeff Bronstein, Beate Ritz, Agricultural paraquat dichloride use and Parkinson's disease in California's Central Valley, *International Journal of Epidemiology*, Volume 53, Issue 1, February 2024, dyae004, <https://doi.org/10.1093/ije/dyae004>