



# Time to root plant health in One Health

## Background

Plant health is increasingly recognized as a vital pillar of the One Health (OH) approach, which recognizes the interconnection of human, animal, plant and ecosystem health. Yet, plant health is often overlooked in strategic plans.

The One Health Joint Plan of Action (2022–2026) was developed by the UN Quadripartite for One Health – a collaboration between the UN Food and Agriculture Organization (FAO), the UN Environment Programme (UNEP), the World Health Organization (WHO), and the World Organization for Animal Health (WOAH) – to manage cross-sectoral health threats and foster collaboration. Integrating plant health into this strategy is essential to tackling issues such as pesticide risks, mycotoxins, invasive species, and biodiversity loss, which threaten global food security and human health.

## Key points

Despite growing recognition of plant health as an important component of OH, the two worlds remain largely disconnected. Key issues include:

- Narrow conceptual focus – OH discourse and national action plans remain dominated by zoonoses and antimicrobial resistance (AMR), with minimal engagement from plant or agricultural sectors. Plant health tends to be subsumed into ‘the environment’, with its specific role omitted.

This evidence brief contributes to a One Health research roadmap, produced by the One Health Hub with support from UK International Development.

The brief provides the key takeaways from a policy forum article on the critical role of plant health in One Health, supplemented by data from a bibliometric analysis of 6,168 publications from 2010 to 2024 where One Health appeared in the title or abstract. Both papers were published in the journal CABI One Health.

- Limited inclusion in strategy – Plant health is often overlooked in strategic plans within OH. Of 114 activities in the One Health Joint Plan of Action, only one promotes climate-smart approaches to sustainable agriculture. Plant-related risks such as pesticide risks or mycotoxins are not specifically addressed.
- Missed synergies – Analysis of research literature shows that a wealth of cross-sectoral plant health work, such as agroecology, biological control, or pesticide management, is aligned with OH principles but remains ‘undeclared’. This (self-) exclusion from the OH framework means plant health remains disconnected from OH communities and funding streams.
- Institutional representation – The disconnect between plant health and OH means the ‘plant world’ misses the political and institutional clout of bodies like the Quadripartite and the One Health High-Level Expert Panel (OHHLEP), essential for driving global support.
- Funding imbalance – The majority of 17 recently identified OH funding schemes concentrate on human health dimensions such as zoonoses, AMR and pandemic preparedness. Few take plant health into consideration.

- Global goals – The disconnect between plant health and OH weakens responses to interlinked global crises, such as food insecurity, biodiversity loss, chemical pollution, and antimicrobial resistance. It obscures critical knowledge gaps and undermines the OH goal of optimizing health across all domains.

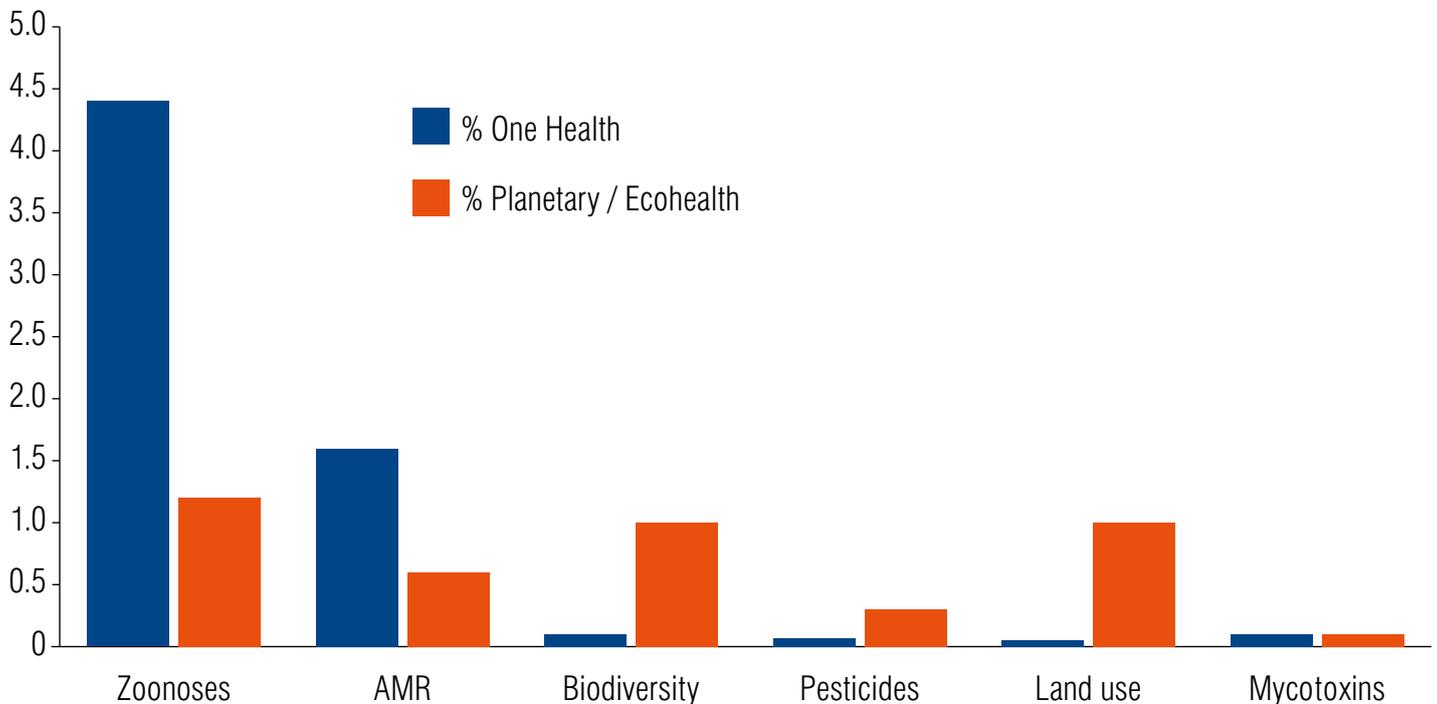
## Recommendations

► **Researchers:** Connect actors across sectors, leveraging ‘undeclared’ One Health work to strengthen the concept of plant health as a pillar on OH and inspire new ways of working together. This could help secure recognition and funding for plant health research.

► **Funders:** Consider including plant health components as a requirement of OH proposals, tracking plant health outcomes through measurable indicators. This could encourage greater innovation and creativity in addressing plant health issues.

► **Policymakers:** Incorporate plant health into OH strategies, engaging the Quadripartite and OHHLEP to drive global integration. Plant health should be incorporated explicitly into the next Quadripartite Joint Plan of Action (post-2026), addressing pesticide risks, mycotoxins, and invasive species as cross-sectoral health priorities.

**Percentage of research labelled One Health vs planetary / ecosystem health.**  
Plant health topics are less often examined through a OH approach, compared with other topics.



## Conclusion

Despite growing recognition of the importance of plant health within OH, it remains marginal in OH research, funding, and policy. The redrawing of the Quadripartite’s Joint Plan of Action from 2026 presents an ideal opportunity to rethink strategy and engagement and fully establish plant health as an integral part of OH. Collaboration across sectors among researchers, policymakers, and funders will be pivotal to achieving this goal.

**Reference:** Danielsen, S., Schaffner, U.; Zinsstag, J. Worlds apart: Plant health and One Health and a path to convergence, CABI One Health, 4:1, 0013 (2025). <https://doi.org/10.1079/cabionehealth.2025.0013>.

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