

Louise E.M. Vet is director of the Netherlands Institute of Ecology (NIOO), the largest institute of the Royal Netherlands Academy of Arts and Sciences (KNAW), and professor of Evolutionary Ecology at Wageningen University.



She is a biologist with a broad interest in ecology and evolution of multitrophic interactions. Her research involves chemical, behavioural and molecular ecology of plants and insects in a community context, delivering basic knowledge for the strategic development of sustainable agro-ecosystems that are primarily based on the prevention of pests and diseases (life-support function of biodiversity). She is an elected member of the Royal Netherlands Academy of Arts and Sciences. Vet was awarded several international prizes for her research (e.g. British Rank Prize for Nutrition) and serves on a diversity of national and international boards and committees

## Research interests

### Positions:

Researcher

Director of the NIOO

Personal Page: <https://nioo.knaw.nl/nl/employees/louise-vet>

### Research Interests:

Louise Vet is a professor of Evolutionary Ecology at Wageningen University and director of the Netherlands Institute of Ecology (NIOO-KNAW), a research institute of the Royal Netherlands Academy of Arts and Sciences. She is an ecologist with a broad interest in ecology and evolution, working on multitrophic interactions, parasitoid behaviour and especially parasitoid learning. Her research involves chemical, behavioural and molecular ecology of plants and insects in a multitrophic and community context. The research ranges from fundamental to strategic: from questions on the evolution of species traits and species interactions within communities to the strategic development of sustainable agro-ecosystems that are primarily based on the prevention of pests and diseases (life-support function of biodiversity). She is an elected member of the Royal Netherlands Academy of Arts and Sciences. Vet was awarded several international prizes (e.g. British Rank Prize for Nutrition).

### Keywords:

Evolutionary ecology of multitrophic systems;

Search strategy and life history of insect parasitoids;

Role of infochemicals; Information processing;

Ecogenomics

## Research output

- 1. Chromosomal scale assembly of parasitic wasp genome reveals symbiotic virus colonization**  
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- 2. Multi-camera field monitoring reveals costs of learning for parasitoid foraging behaviour**  
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- 3. Next Generation Biological Control: The Need for Integrating Genetics and Evolution**  
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- 4. From toilet to agriculture: Fertilization with microalgal biomass from wastewater impacts the soil and rhizosphere active microbiomes, greenhouse gas emissions and plant growth**  
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5. **Chapter Four - Integrating biodiversity conservation in wider landscape management: Necessity, implementation and evaluation**  
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6. **Do plant volatiles confuse rather than guide foraging behavior of the aphid hyperparasitoid *Dendrocerus aphidum*?**  
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8. **Impact of hydraulic retention time on community assembly and function of photogranules for wastewater treatment**  
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11. **Effects of temperature and food source on reproduction and longevity of aphid hyperparasitoids of the genera *Dendrocerus* and *Asaphes***  
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22. **Habitat complexity reduces parasitoid foraging efficiency, but does not prevent orientation towards learned host plant odours**  
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36. **Effects of glucosinolates on a generalist and specialist leaf-chewing herbivore and an associated parasitoid**  
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37. **Herbivore-mediated effects of glucosinolates on different natural enemies of a specialist aphid**  
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38. **High throughput olfactory conditioning and memory retention test reveal variation in *Nasonia* parasitic wasps**  
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40. **Optimal resource allocation to survival and reproduction in parasitic wasps foraging in fragmented habitats**  
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45. **Natural variation in learning rate and memory dynamics in parasitoid wasps: opportunities for converging ecology and neuroscience**  
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47. **Relative importance of plant-mediated bottom-up and top-down forces on herbivore abundance on Brassica oleracea**  
Kos, M., Broekgaarden, C., Kabouw, P., Oude Lenferink, K., Poelman, E. H., Vet, L. E. M., Dicke, M. & van Loon, J. J. A., 2011, In: Functional Ecology. 25, 5, p. 1113-1124
48. **Temporal dynamics of herbivore-induced responses in Brassica juncea and their effect on generalist and specialist herbivores**  
Mathur, V., Ganta, S., Raaijmakers, C. E., Reddy, A. S., Vet, L. E. M. & Van Dam, N. M., 2011, In: Entomologia Experimentalis et Applicata. 139, 3, p. 215-225
49. **The 'usurpation hypothesis' revisited: dying caterpillar repels attack from a hyperparasitoid wasp**  
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50. **Behaviour of male and female parasitoids in the field: influence of patch size, host density and habitat complexity**  
Bezemer, T. M., Harvey, J. A., Kamp, A. F. D., Wagenaar, R., Gols, R., Kostenko, O., Fortuna, T., Engelkes, T., Vet, L. E. M., Van der Putten, W. H. & Soler, R., 2010, In: Ecological Entomology. 35, 3, p. 341-351
51. **CREB expression in the brains of two closely related parasitic wasp species that differ in long-term memory formation**  
Van den Berg, M., Verbaarschot, P., Hontelez, S., Vet, L. E. M., Dicke, M. & Smid, H. M., 2010, In: Insect Molecular Biology. 19, 3, p. 367-379
52. **Ecological fits, mis-fits and lotteries involving insect herbivores on the invasive plant, *Bunias orientalis***  
Harvey, J. A., Biere, A., Fortuna, T., Vet, L. E. M., Engelkes, T., Morriën, W. E., Gols, R., Verhoeven, K. J. F., Vogel, H., Macel, M., Heidel-Fischer, H., Schramm, K. & Van der Putten, W. H., 2010, In: Biological Invasions. 12, 9, p. 3045-3059
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Van Dam, N. M., Qiu, B., Hordijk, C. A., Vet, L. E. M. & Jansen, J. J., 2010, In: Journal of Chemical Ecology. 36, 9, p. 1006-1016

**For more information contact: .....**

PUBLIC OUTREACH, ECOLOGY MEETS ECONOMY!

See my TED-lectures (2009 and 2011) online: <http://www.tedxamsterdam.nl/2009/video-louise-vet-on-the-marriage-between-economy-and-ecology/>

Apart from my professional interest in high quality ecological scientific research, I promote ecological awareness to achieve a good marriage between ecology and economy. I am an optimist and believe in the power of positive action. Pointing to positive achievements is crucial to get things done in the future. It will stimulate positive awareness, additional action, creative solutions and multiple approaches, e.g. partnerships as a tool to conserve biodiversity. It will arouse political involvement and stimulate technical solutions where possible. It facilitates the achievement of consumer-driven demands that are very powerful to persuade or force industries to take their responsibilities.

## Activities