Curriculum vitae

Role in the project Project manager ☐ Project participant ☒

First name, Surname:	Andrea Ficke		
Date of birth:	19.01.1974	Sex:	Female
Nationality:	German		
Researcher unique identifier(s):	https://orcid.org/0000-0002-3438-3842		
URL for personal website:	https://www.nibio.no/ansatte/andrea-ficke		

Education and Scientific degrees

Year	Faculty/department - University/institution – Country
2002	Ph.D. defense date: 15.02.2002, Ph.D. graduation date: 26.05.2002.
1997-2002	Master/Ph.D. program at the Department of Plant Pathology and Plant-Microbe interactions at Cornell University, Ithaca and Geneva, USA. Dissertation: *Changes in the susceptibility of developing grape berries to Uncinula necator: Effect of ontogenic resistance on pathogen establishment and development, potential host barriers to infection, and host responses to inoculation and infection*
1996	Graduate school, Department of Plant Biology, Georg-August University, Göttingen, Germany
1995	Vordiplom/Bachelor, Microbiology and Botany, Georg-August University, Göttingen, Germany

Academic employment and career

Year	Job title – Employer – Country
2023	Research Professor in the Department of Fungal Plant Pathology in Forestry, Agriculture and Horticulture, Division of Biotechnology and Plant Health at the Norwegian Institute for Bioeconomy Research in Ås, Norway.
2011-2012	Advisor to Graminor A.S. to support breeding for disease resistance in Cereals in a 10% external position.
2009-current	Current Position: Cereal Plant Pathologist at the Division of Biotechnology and Plant Health at the Norwegian Institute for Bioeconomy Research in Ås, Norway. I am working on the epidemiology of leaf and stem diseases in cereals and oilseed crops, including developing disease risk models, disease severity-yield relationships, fungicide resistance and early detection of diseases for use in precision agriculture.
2009	Breeding manager of the Cucumber Department at Rijkzwaan B.V., The Netherlands. Overseeing and organizing research activities in cucumber breeding. Management of staff at the cucumber department. Continued pre- breeding work in cucumber and melon
2007-2008	Pre-breeder for Cucurbitaceae at Rijkzwaan, De Lier, The Netherlands. Assessed breeding priorities and lead short- and long-term projects to improve disease and stress resistance, fruit qualities and plant architecture in melon, watermelon, cucumbers and pickles.

2002-2004	Post-doctoral scientist at the Department of Plant Pathology, Wageningen University, The Netherlands. In collaboration with Dr. Jos Raaijmakers, the work focused on the efficacy and mode of action of a surface tension reducing, zoosporocidal cyclic lipopeptide produced by *P. fluorescens* in controlling oomycete root and leaf diseases
1997-2002	PhD candidate with Professor Robert C. Seem's laboratory at Cornell's Department of Plant Pathology and Plant-Microbe Biology at the New York State Agricultural Experiment Station in Geneva. Dissertation research focused on morphological, physiological and molecular factors involved in development of ontogenic resistance in grape berries. Outcomes of this research are now the basis of improved management programs for grapevine powdery mildew worldwide

Career breaks

Year	Reason
2004-2007	Maternal leave, 2 children
2012-2013	Maternal leave, 3rd child
2014-2015	Maternal leave, 4th child

Honors and Awards

Year	Description of honors/awards
1996	Fulbright Scholar. A national competitive program of the US Department of State that brings citizens of other countries to the US for graduate study at U.S. universities.
2002	Research Fellow, DAAD (Deutscher Akademischer Austausch Dienst). A competitive program administered by the German Academic Exchange Service to support post graduate training of German scientists at partner institutions. Proposal: *Biosurfactant producing Pseudomonas to control Phytopthora in different crops* with Dr. Jos Raaijmakers at Wageningen University, The Netherlands.
2012	Lee M. Hutchins Award given by the American Phytopathological Society. 'This award honors individuals who have made an outstanding, innovative research contribution that has changed, or has the potential to change, the direction of research in any field of plant pathology'. The award was given to recognize A. Ficke and two colleagues (M. Kennelly and Lisa Hoffman) who independently, but in parallel made key discoveries in ontogenic resistance to three of the most destructive diseases in grapevine. These discoveries are now part of advanced advisory systems for grapevine diseases worldwide.

Professional memberships and working groups

Year	Description
2023-current	Member of the Cost Action **CA22102 - European Network In CHEmical Ecology: translating the language of life into sustainability (E-NICHE)**
2022-current	Plant Health Working Group to the European Plant Science Organization (EPSO).
2013-current	Subject matter committee on **Crop Loss**, International Society of Plant Pathology (ISPP)
2011-current	**Epidemiology committee** to the American Phytopathological Society (APS).
2011-current	**Crop Loss and Risk Assessment** committee (chair in 2018) to the American Phytopathological Society (APS).
2010-current	Nordic Baltic Resistance Action Group (NorBaRAG)
1998-current	American Phytopathological Society

Scientific management

Year	Description - Role

2024-2025	Organizing the International Symposium on Losses caused by plant pathogens, supported by the International Society of Plant Pathology
2023-current	Chair of the subject matter committee on Crop Loss, ICPP.
2022-current	Member of the Norwegian national reference group to the National Contact Point (NCP) for Horizon Europe, cluster 6.
2022-2026	Deputy member to the Norwegian Plant variety board, the Norwegian national organ of the Royal agricultural and food department an organization to grant plant breeders' rights and make recommendations to the Norwegian Safety Authorization regarding the approval of new varieties of agricultural crops (cereals, potato and fodder crops).
2020	Monitor expert for reviewing the H2020 project 773311 – RUSTWATCH.
2020	Moderator for the Special Session: Management Thresholds: Risks, Challenges and Solution at the APS annual meeting August 10th-14th (digital).
2019	Co-organizer of the IDEA CAFE: Management Thresholds: Risks, Challenges, and Opportunities. In *Plant Health 2019*: the Annual Meeting of the American Phytopathological Society (APS).
2018	Chair of the Crop Loss Committee to the American Phytopathological Society (APS).
2018- 2021	Senior editor to 'Plant Disease', a peer-reviewed journal of the American Phytopathological Society (APS).
2018	Co-convenor: 12th International Epidemiology Workshop at Lillehammer, Norway.
2018	Co-organizer of the Special Session: Hidden yield losses at the joint APS/International Congress of Plant Pathology, Boston, MA, USA.
2018	Organizer of the 10th annual meeting of the Nordic Baltic Resistance Action Group, discussing pesticide resistance and emerging risks in the Nordic Baltic region. Norway (08.03-09.03.2018).
2017-2018	Chair of the Nordic Baltic Resistance Action Group (NORBARAG; https://projects.au.dk/norbarag/).
2016-2018	Associate editor to the peer-reviewed journals 'Plant Disease' and 'European Journal of Plant Pathology'.
2011	Chair for the Special Session on Crop loss-disease relationships at the APS meeting, August 6th -10th, in Honolulu, Hawai, USA.

Project management experience

Year	Project owner - Project - Role – Funder
2011-2014	Work package leader for the 'Early detection of cereal diseases' in the Norwegian Research Council (NRC) funded research project on '**Multisensory agriculture, improving yields and reducing environmental impact'** (Multisense, project leader: Dr. A. Korsæth, NIBIO).
2012-2016	Work package leader to develop IPM strategies to control disease in protein crops in the NRC research project on **'Increased and sustainable production of healthy and nutritious protein crops'** (project leader: Dr. G. Brodal, NIBIO).
2012-2016	Project leader for the internal strategic institute commitment on **'PlantStrength'**, a research project to strengthen NIBIO's competence in cross-disciplinary research on pathogens, weeds and pests to design effective Integrated Pest Management (IPM) strategies in cereals.
2013-2016	Work package leader to characterize Norwegian *Parastagonospora nodorum* and *Pyrenophora* teres population in the NRC funded project **'Increased cereal yields through improved resistance against leaf diseases in barley and wheat'** (project leader: Professor M. Lillemo, NMBU).
2014-2018	Work package leader to optimize IPM strategies for diseases of spring oilseed rape in the NRC funded research project 'Improving the profitability of spring oilseed Brassica production – a key to improving quality and yield of cereal crops in Norway (BRAKORN)' (project leader: Dr. W. Waalen, NIBIO).
2015-2019	Work package leader on disease detection by remote sensing in the NRC funded project

	'**Sustainable intensification of Norwegian cereal production by means of technology-driven adjustments of applied nitrogen and fungicides (STRESSLESS)**' (project leader Dr. K. Kusnierek, NIBIO)
2015-2016	Project leader for a pre-project funded by the Norwegian Agricultural directorate: **Yellow rust in Norwegian wheat.**
2017-2019	Task leader to survey and evaluate data and models for implementation in decision Support systems in the C-IPM project 'IT-solutions for user friendly IPM-tools in the management of leaf spot diseases in cereals (SPOT-IT), lead by Dr. B. Nordskog.
2016-2018	Project leader for a pre-project funded by the Norwegian Agricultural directorate: **Leaf diseases in Norwegian wheat**.
2020-2022	Project leader for '**More organically grown cereals through better soil and plant health**', funded by the Norwegian Agricultural directorate.
2020-2023	Work package leader to understand the epidemiology of yellow rust in Norwegian wheat in the NRC funded research project '**Sustainable management of rust diseases in wheat'**, led by Professor M. Lillemo, NMBU.
2021-2022	Norwegian partner in **NORDICGRAIN - Sustainable disease management in cereals in the Nordic region,** led by Dr. T. M. Heick, Arhus University
2023-2026	Project leader for '**More diversity in cropping strategies to increase profitable production of healthy organic cereal and oilseed crops'** funded by the Norwegian Agricultural directorate.
2023-2026	Project leader for '**Plant Pest Prevention through technology-guided detection and site-specific control (PurPest)**'. Funded under cluster 6 of the Horizon Europe Farm2Fork program.
2025-2027	Project leader for **'Monitoring yellow rust invasions into Norway for effective management** funded by the Norwegian Agricultural directorate.
2025-2029	Leader of WP2: Specifications of VOC profiles in the EU funded project **SenseApest** (**Portable air analysis device for on-site pest detection during plants import controls)**

Supervision of students (co-advisor)

Program	Year	Student (University, Country): Thesis title
M. Sc.	2011	Jan-Eivind Kvam-Andersen (NMBU, Norway): *Ramularia Leaf Spot: Seed infection in field and possible management methods.*
M. Sc.	2013	Anja Karine Ruud (NMBU, Norway): *QTL for leaf blotch diseases in spring wheat and a method to inoculate wheat seedlings with Stagonospora nodorum.*
M. Sc.	2014	Chloé Grieu (Université de Rouen Normandie, France): *Molecular detection and epidemiological study of Sclerotinia sclerotiorum in spring oilseed rape in Norway.*
M. Sc.	2020	Christopher Dane Bjørge Frøiland (NMBU, Norway): *A genetic investigation of yellow rust resistance in wheat.*
M. Sc.	Current	Vegard Skogstad (NMBU, Norway): *Fungal resistance in border zones to azole treated areas*.
Ph.D.	2017	Anja Karine Ruud (NMBU, Norway): Resistance to Septoria nodorum blotch (SNB) and the importance of sensitivity to necrotrophic effectors in Norwegian spring wheat
Ph.D.	2017	Ronja Wonneberger (NMBU, Norway): *Resistance studies and genetic characterization of the barley- Pyrenophora teres pathosysem*.
Ph.D.	2020	Min Lin (NMBU, Norway): *Genetic studies of the wheat-Parastagonospora nodorum pathosystem.*
Ph.D.	Current	Eliisa Malin (LUKE, Finland)*: IPM strategies to control plant diseases on cereals in Finland.*

Societal impact and dissemination

Determined the period of susceptibility of grape berries to powdery mildew during my Ph.D. research on ontogenic resistance. This research is now an essential component of advanced advisory systems for grapevine diseases worldwide and has served as model for similar studies in several fruit and vegetable crops. See the description of this work on the Honorary Award page for the Hutchins award at APSnet.org: (https://www.apsnet.org/members/give-awards/awards/Hutchins/Pages/Ficke_Hoffman_Kennelly.aspx).

Designed and promoted the use of disease risk models to support national extension services and assist farmers in aligning fungicide sprays with the actual need to suppress disease in the field. A. Ficke organized field trials to test the Danish humidity model and the automatic Finnish netblotch model to estimate when field conditions are favorable for leaf blotch diseases in cereals. These models have been available on the national information platform for farmers and agricultural advisors at https://www.vips-landbruk.no/ since 2020. A short video on the use of the humidity model was released in April 2023 (https://vimeo.com/818734601z). This humidity model https://www.vips-landbruk.no/blotch/septoriahumidity/ was viewed 516 times in 2022 (Google analytics). A risk modell based on Norwegian field data from spring wheat trials over 20 years has been developed, tested and published in a peer-reviewed journal. This model is now also available to support a farmer's decision on fungicide applications at www.vips-landbruk.no.

Updated information on key fungal disease threats to cereals and oilseed crops on the national website for plant protection (www.plantevernleksikonet.no), thereby informing farmers on the epidemiology and management of the pathogens threatening their crops. This website is the current national resource on pathogen and insect pests in Norway.

Collaborated within and communicated key information to stakeholder on fungicide resistance from the Nordic Baltic Action Resistance Group (NorBaRAG); thereby promoting the sustainable use of fungicides within the Nordic Baltic countries. Annual NorBaRAG meetings are attended by representatives of national institutes, universities and private sector scientists and advisors (https://projects.au.dk/norbarag)

Cooperation and activity connected to stakeholders and industry

Rijkzwaan Zaadteelt og Zaadhandel B.V., an international breeding company for vegetables: Supported breeding efforts to introduce nematode and disease resistance into cucumbers and melons to promote consumption of healthy vegetables and reduce pesticide use in greenhouses (www.rijkzwaan.com).

Graminor AS, the Norwegian breeding company: Collaboration in four national projects to support more effective breeding strategies for disease resistance in cereals, worked in a 10% position as advisor to the company to support breeding efforts on disease and nematode resistance.

The Norwegian Food and Health Administration (Mattilsynet): Reviewer of applications to register fungicides in cereals on the Norwegian market and provider of recommendations to the Norwegian Food and Health Administration regarding these applications. Since 2012, A. Ficke has reviewed 20 applications for new and renewed registrations of fungicides for minor

and major uses in cereals and oilseed crops from different fungicide companies. In addition, she has conducted field trials to evaluate the forgoing products to confirm efficacy and safety, and to improve official recommendations on timing and dosage of different products under Norwegian conditions.

The Norwegian Agricultural Advisory Service (NLR): Close collaboration to test fungicides (new products, dosage and timing) in the field, frequent information exchange on current cereal health topics, especially on yellow rust and leaf blotch disease management in wheat. Setting up and discussing field trials to test sustainable disease management strategies in cereals and oilseed crops. Regular field visits to farmer fields (biweekly during the start of the season) and talks on famer days and field walks.

The Norwegian University of Life Sciences (NMBU): Joined supervision of Master and Ph.D. students with Professor M. Lillemo, Institute of Plant Sciences. Development of joined project proposal and collaboration on two national projects ('Increased cereal yields through improved resistance against leaf diseases in barley and wheat' and 'Sustainable management of rust diseases in wheat').

The Norwegian Veterinary Institute: Joined supervision of Master students with Professor I. Skaar, department leader for Chemistry and Toxicology. Collaboration on the national projects focusing on the use of azoles in agriculture and their potential role in resistance to antifungal medication in *Aspergillus fumigatus*, a major human health threat (NavAzol, AMRprevent).

SINTEF, International Research Institute of Technology: Collaboration on testing optical sensors for detection of volatiles associated with plant pests and diseases in the national project 'Multisensory agriculture, improving yields and reducing environmental impact' and the Horizon Europe funded project 'PurPest**:** Plant pest prevention through technology-guided monitoring and site-specific control'.

Felleskjøpet, Strand Unikorn and Norgesfôr: Norwegian's main farming cooperatives: Collaboration and financial support in 3-4 nationally funded research projects. Discussion partners to prioritize research topics and implement plant health management strategies.

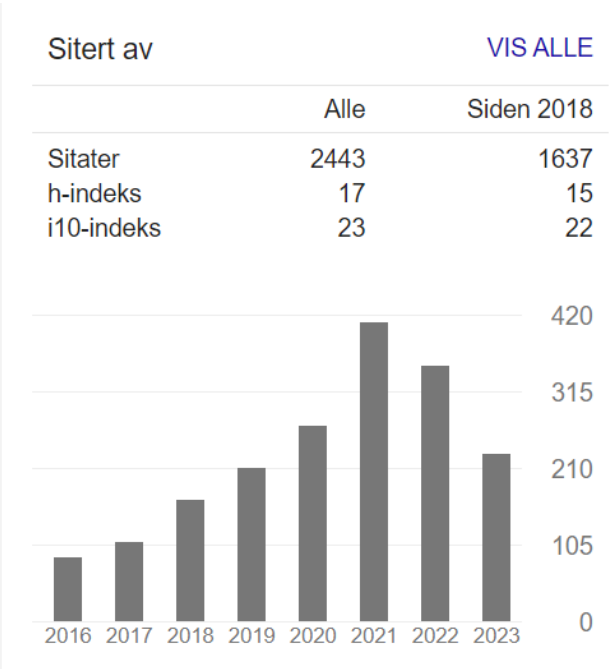
Bayer AS, Syngenta, Nufarm: Producers and/or distributers of plant protection products: Organization of annual field trials, discussion of management strategies (dosage and timing of fungicide applications) and financial support of 3-4 national research proposals.

Andrea Ficke is an active and engaged member within the **International Society of Plant Pathology** (ISPP), the **European Plant Science Organization**, the **European Foundation of Plant Pathology** (EFPP), the **American Phytopathological Society, the Nordic Association of Agricultural Sciences** (NJF), the Nordic Baltic Resistance Action Group (NorBaRAG) and numerous international working groups, thereby enlarging NIBIO's global scientific network, raising its international visibility through initiation, co-sponsorship, or interactions within several research and outreach visits of international scientists to NIBIO from **INRA**, France (2 visiting scientists), , **LUKE**, Finland (1 visiting scientist, co-supervision and visit of 1 Ph.D. student) , **CEITEC**, Czech Republic (1 visiting Ph.D. student, invited talk), **UniLaSalle**, France (1 Master and 1 Bachelor student), **Université de Rouen Normandie**, France (1 Master student) and **University São Paulo**, Brazil (1 Bachelor student).

Impact of research within the peer scientist community is documented by h-index (17) and i10-index (23; meaning over 2/3 of peer-reviewed papers have been cited 10 or more times, with a total number of 2443 citations.

Track record (as of 29.09.23, Google scholar, Research Gate)

Publication summary:
30 articles in peer-reviewed journals, 2 book chapters, 20 non-peer reviewed articles, 2 invited talks, 31 published abstracts of presentations at scientific meetings, 11 national reports, 11 articles in newspapers and interviews, 2 instructional videos and 2 internet webpages. Total number of citations: 2443, h-index: 17, i10-index: 23.



Citations: Number of citations of peer-reviewed papers, excluding self-citations.

h-index: Hirsch index is defined as the maximum value of *h* such that the given author/journal has published at least *h* papers that have each been cited at least *h* times. The *h*-index is the largest number *h* such that *h* articles have at least *h* citations each.

i10-index: the number of peer-reviewed publications with at least 10 citations, excluding self-citations.

Google Scholar altmetrics (https://scholar.google.com/citations?user=5lxITjYAAAAJ&hl=no&oi=ao)
Research Gate altmetrics: 69.580 reads, 2505 citations (https://www.researchgate.net/profile/Andrea-Ficke)

List of publications:

1. Heinemann, H., Durand-Maniclas, F., Seidel, F., Ciulla, F., Bárcena, T. G., Camenzind, M., Corrado, Csűrös, Z., Czakó, Z. S., Eylenbosch, D., **Ficke**, A ... and Don, A. 2025. Optimising Root and Grain Yield Through Variety Selection in Winter Wheat Across a European Climate Gradient. *European Journal of Soil Science*, *76*(2).

2. Lin, M., **Ficke, A.**, Dieseth, J. A., Lillemo, M. 202). Genome-wide association mapping of septoria nodorum blotch resistance in Nordic winter and spring wheat collections. *Theoretical and Applied Genetics*, *135*(12):4169-4182.

3. **Ficke**, A., Asalf, B., Norli, H. R. 2022. Volatile Organic Compound Profiles from Wheat Diseases Are Pathogen-Specific and Can Be Exploited for Disease Classification. *Frontiers in Microbiology*, 12:4016.

4. Andersson, B., Djurle, A., Ørum, J. E., Jalli, M., Ronis, A., **Ficke, A**., Jørgensen, L. N. 2022. Comparison of models for leaf blotch disease management in wheat based on historical yield and weather data in the Nordic-Baltic region. *Agronomy for Sustainable Development*, *42*(3):42.

5. Hjelkrem, A. G. R., **Ficke, A**., Abrahamsen, U., Hofgaard, I. S., Brodal, G. 2021. Prediction of leaf Bloch disease risk in Norwegian spring wheat based on weather factors and host phenology. *European Journal of Plant Pathology*, 160:199-213.

6. Lin, M., Stadlmeier, M., Mohler, V., Tan, K. C., **Ficke, A**., Cockram, J., Lillemo, M. 2021. Identification and cross-validation of genetic loci conferring resistance to Septoria nodorum blotch using a German multi-founder winter wheat population. *Theoretical and Applied Genetics*, *134*:125-142.

7. Justesen, A. F., Corsi, B., **Ficke, A**., Hartl, L., Holdgate, S., Jørgensen, L. N., ... Cockram, J. 2021. Hidden in plain sight: a molecular field survey of three wheat leaf blotch fungal diseases in North-Western Europe shows co-infection is widespread. *European Journal of Plant Pathology*, *160*(4): 949-962.

8. Jørgensen, L. N., Matzen, N., **Ficke, A**., Andersson, B., Jalli, M., Ronis, A., ... Djurle, A. 2021. Using risk models for control of leaf blotch diseases in barley minimises fungicide use–experiences from the Nordic and Baltic countries. *Acta Agriculturae Scandinavica, Section B—Soil & Plant Science*, *71*(4):247-260.

9. Downie, R. C., Lin, M., Corsi, B., **Ficke, A.,** Lillemo, M., Oliver, R. P., ..., Cockram, J. 2021. Septoria nodorum blotch of wheat: disease management and resistance breeding in the face of shifting disease dynamics and a changing environment. *Phytopathology®*, *111*(6):906-920.

10. Asalf, B., **Ficke, A**., Klingen, I., 2021. Interaction between the Bird Cherry-Oat Aphid (*Rhopalosiphum padi*) and Stagonospora Nodorum Blotch (*Parastagonospora nodorum*) on Wheat. *Insects*, *12*(1): p.35.

11. Willocquet, L., Meza, W.R., Dumont, B., Klocke, B., Feike, T., Kersebaum, K.C., Meriggi, P., Rossi, V., **Ficke, A**., Djurle, A., Savary, S., 2021. An outlook on wheat health in Europe from a network of field experiments. *Crop Protection*, 139: 105335.

12. Jalli, M., Kaseva, J., Andersson, B., **Ficke, A**., Nistrup-Jørgensen, L., Ronis, A., Kaukoranta, T., Ørum, J.E. and Djurle, A., 2020. Yield increases due to fungicide control of leaf blotch diseases in wheat and barley as a basis for IPM decision-making in the Nordic-Baltic region. *European Journal of Plant Pathology*, 158:1-19.

13. Jørgensen, L.N., Matzen, N., **Ficke, A**., Nielsen, G.C., Jalli, M., Ronis, A., Andersson, B., Djurle, A., 2020. Validation of risk models for control of leaf blotch diseases in wheat in the Nordic and Baltic countries. *European Journal of Plant Pathology* 157:599-613.

14. Lin, M., **Ficke, A.**, Cockram, J., Lillemo, M., 2020. Genetic structure of the Norwegian *Parastagonospora nodorum* population. *Frontiers in microbiology*, 11:1280.

15. Lin, M., Corsi, B., **Ficke, A.,** Tan, K. C., Cockram, J., Lillemo, M. 2020. Genetic mapping using a wheat multi-founder population reveals a locus on chromosome 2A controlling resistance to both leaf and glume blotch caused by the necrotrophic fungal pathogen *Parastagonospora* nodorum. *Theoretical and Applied Genetics*, *133*(3):785-808.

16. Ruud, A. K., Dieseth, J. A., **Ficke, A.,** Furuki, E., Phan, H. T., Oliver, R. P., ... & Lillemo, M. 2019. Genome-Wide Association Mapping of Resistance to Septoria Nodorum Leaf Blotch in a Nordic Spring Wheat Collection. *The Plant Genome*, *12*(3), 180105.

17. **Ficke, A.,** Grieu C., Brurberg, M.B., Brodal, G. 2018. The role of precipitation, and petal and leaf infections in Sclerotinia stem rot of spring oilseed brassica crops in Norway. *European Journal of Plant Pathology* 152.4: 885-900.

18. **Ficke, A**., Cowger, C., Bergstrom, G., Brodal, G. 2018. Understanding yield loss and pathogen biology to improve disease management: Septoria nodorum blotch-A case study in wheat. *Plant Disease* 102 (4):696-707.

19. Wonneberger, R., **Ficke, A**., Lillemo, M. 2017. Identification of quantitative trait loci associated with resistance to net form net blotch in a collection of Nordic barley germplasm. *Theoretical and Applied Genetics*, 130:2025-2043.

20. Wonneberger, R., **Ficke, A**., Lillemo, M. 2017. Mapping of quantitative trait loci associated with resistance to net form net blotch (*Pyrenophora teres f. teres*) in a doubled haploid Norwegian barley population. *PLoS One*, *12*(4), e0175773.

21. Savary, S., Djurle, A., Yuen, J., **Ficke**, A., Rossi, V., Esker, P.D., Fernandes, J.M.C., Del Ponte, E.M., Kumar, J., Madden, L.V., Paul, P., McRoberts, N., Singh, P.K., Huber, L C. Pope de Vallavielle, S. Saint-Jean, Willocquet, L. 2017. A White Paper on Global Wheat Health Based on Scenario Development and Analysis. *Phytopathology* 107.10:1109-1122.

22. Brodal, G., Warmington, R., Grieu, C., **Ficke, A.,** Clarkson, J. P. 2017. First report of *Sclerotinia subarctica* nom. prov. (*Sclerotinia* sp. 1) causing stem rot on turnip rape (Brassica rapa subsp. oleifera) in Norway. *Plant Disease*, *101*(2): 386-386.

23. Savary, S., **Ficke, A**., Aubertot, J. N., Hollier, C. 2012. Crop losses due to diseases and their implications for global food production losses and food security. *Food Security* 4:519-537.

24. Tran, H., **Ficke, A.,** Asiimwe, T., Hoefte, M., Raaijmakers, J.M. 2007. Role of the cyclic lipopeptide massetolide A in biological control of *Phytopthora infestans* and in colonization of tomato plants by *Pseudomonas fluorescens*. *New Phytologist* 175 (4):731-742.

25. Gadoury, D.M., Seem, R.C., Wilcox, W.F., Henick-Kling, T., Conterno, L., Day, A., **Ficke, A.** 2007. Effects of diffuse colonization of grape berries by *Uncinula necator* on bunch rots, berry microflora, and juice and wine quality. *Phytopathology* 97 (10):1356-1365.

26. **Ficke, A**., Gadoury, D.M., Seem, R.C., Godfry, D., Dry, I.B. 2004. Host Barriers and Responses to *Uncinula necator* in developing Grape Berries. *Phytopathology* 94 (5):438-445.

27. **Ficke, A**., Gadoury, D.M., Seem, R.C., Dry, I.B. 2003. Effects of ontogenic resistance upon establishment and growth of *Uncinula necator* on Grape Berries. *Phytopathology* 93 (5):556-563.

28. Gadoury, D.M., Seem, R.C., **Ficke, A**., Wilcox, W.F. 2003. Ontogenic Resistance to Powdery Mildew in Grape Berries. *Phytopathology*. 93 (5): 547-555.

29. **Ficke, A**., Gadoury, D.M., Seem, R.C. 2002. Ontogenic Resistance and Plant Disease Management: A Case Study of Grape Powdery Mildew. *Phytopathology* 92(6):671-675.

30. Gadoury, D.M., Seem, R.C., Wilcox, W.F, **Ficke, A**. 2002. The Epidemiology of Powdery Mildew on Concord Grapes. *Phytopathology*. 91(10):948-955.

31. Hill, G.T., Mitkowski, N.A., Aldrich-Wolfe, L, Emele, L.R., Jurkonie, D.D., **Ficke, A**., and Nelson, E.B. 2000. Methods for assessing the composition and diversity of soil microbial communities. *Applied*

Soil Ecology 15 (1):25-36.

Books/book chapters

1. Savary, S**., Ficke, A**., Aubertot, J.-N., Hollier, C. 2012a. 'Crop Production and Food Security: Impact of Global Change on Shifting Agricultural Systems' in Impacts of Global Change on Crop Production and Food Security. In: Freedman B. (Ed.) Global Environmental Change**.**

2. Savary, S., **Ficke, A.** (2020). CHAPTER 2: Assessing the Global Impacts of Crop Pests and Diseases. In *Emerging Plant Diseases and Global Food Security* (pp. 13-30). The American Phytopathological Society.

Non-peer reviewed articles:

1. **Ficke, A.,** Frøseth, R.B., Aamot, H. U., Brodal., G. 2023. Organisk materiale i jord ob betydning for frøoverførte sjukdommer i korn (Organic matter in the soil and its effect on seedborne diseases in cereals). *Jord-og plantekultur 2023 Forsøk i korn, olje-og belgvekster, engfrøavl og potet 2022:* 101-105.

2. **Ficke, A**., Grieu, C. 2023. Sammenligning av risikomodeller for bladflekksjukdommer i vårhvete (Comparing risk models for leafblotch diseases in spring wheat). *Jord-og plantekultur 2023 Forsøk i korn, olje-og belgvekster, engfrøavl og potet 2022:* 86-92.

3. **Ficke, A**., Abrahamsen, U. 2021. Effektivitet av ulike midler mot bladflekksjukdommer i hvete (Efficiency of different products against leafblotch diseases in wheat). *Jord-og plantekultur 2021 Forsøk i korn, olje-og belgvekster, engfrøavl og potet 2020*:87-91.

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Invited Talks

1. **Ficke, A.** 2023. Detect and react- exploiting volatile based stress communication for plant protection'. RME2023 – the 15th conference in the Rapid Methods Europe series, Amsterdam 07.11.2023

2. **Ficke, A**. 2020. Leaf and stem diseases in cereals and oilseed crops- a relationship too close for comfort' to the Department of Genomics and Proteomics in Plant Systems at the Central European Institute of Technology (CEITEC) in Brno, Czech Republic. 21.04.2021.

Published Abstracts of Presentations at Scientific Meetings

1. **Ficke, A.**, Hjelkrem, A. G., Hofgaard, I. S., Brodal, G. 2020. How to develop and select the right disease risk model for leaf blotch disease management in wheat? *Plant Health 2020 Online*.

2. Nistrup Jørgensen, L., Grønbech Hansen, J., Ørum, J. E., Jalli, M., Ronis, A., Djurle, A., Anderson, B., Skog, T.E., **Ficke, A.**, Nordskog, B. 2018. Weather risk models for prediction of septoria tritici blotch. 12th International Epidemiology Workshop in Lillehammer, 10th-14th of June 2018. *NIBIO BOOK* 4(9) 2018.

3. Eikemo, H., Asalf, B., Vinh, L. H., Grieu, C., **Ficke, A**., 2018. Determining relevant factors for *Sclerotinia sclerotiorum* infection (The Story of a Nightmare). Poster at the 12th International Epidemiology Workshop in Lillehammer, 10th-14th of June, 2018. *NIBIO BOOK* 4(9) 2018.

4. Jalli, M., Kaukoranta, T., Kaseva, J., Andersson, B., **Ficke, A**., Nistrup-Jørgensen, L., ... Djurle, A. 2018. Leaf blotch diseases in barley and wheat in the Nordic-Baltic region: occurrence and yield impact. 12th International Epidemiology Workshop in Lillehammer, 10th-14th of June, 2018. *NIBIO BOOK* 4(9) 2018.

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6. Nordskog, B., **Ficke, A**., Skog, T. E., Veidal, A., Yuen, J., Djurle, A., ... Ørum, J. E. 2017. SpotIT–IT-solutions for user friendly IPM-tools in management of leaf spot diseases in barley and wheat. European Foundation of Plant Pathology conference: Deepen knowledge in plant pathology for innovative agro-ecology. Dunkirk, France, 29.05-02.05.2017. *Book of abstracts*.

7. **Ficke, A**., Asalf, B., Ruud, A. 2016. Ascospore biology of *Parastagonospora nodorum* under Norwegian field conditions. Poster at the Annual American Phytopathological Society meeting in Tampa, Florida, July 30th –August 3rd. *Phytopathology* 106 (12):30-31

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9. Asalf, B., **Ficke, A**., Klingen, I. 2016. Aphid infestation predisposes wheat plants to glume blotch disease (*Parastagonospora nodorum*). Poster at the FA COST Action FA 1405 Workshop in Malaga, Spain. February 10-12th, 2016.

10. **Ficke, A**., Asalf, B., Norli, H. Gerhards, R. 2015. Tidlig oppdagelse av soppangrep i korn - basis for målrettet soppsprøyting (Early detection of fungal infection in cereals- the basis for targeted fungicide applications). I: Bioforsk-konferansen 2015. Sammendrag av presentasjoner og plakater. *Bioforsk Fokus* 10(2):31.

11. Naerstad, R., Le, V., Strømeng, G., Asalf, B., Stensvand, A., **Ficke, A**. 2015. Eksempler på fungicidresistensproblemer i Norge (Examples of fungicide resistance in Norway). I: Bioforsk-konferansen 2015. Sammendrag av presentasjoner og plakater. *Bioforsk Fokus* 10(2):79.

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18. Abrahamsen, U**., Ficke, A.** 2011. Hvordan møter vi resistens utfordringene? (How do we meet the challenge of fungicide resistance?) Bioforsk conferences, Quality Hotel Sarpsborg, 9.-10.02.2011. *Bioforsk Fokus* 6 (2): 97.

19. **Ficke, A**., Abrahamsen, U., Elen, O. 2011. Fungicidresistens hos kornsjukdommer i Norge (Fungicide resistance in cereal diseases). Bioforsk conferences, Quality Hotel Sarpsborg, 9.-10.02.2011. *Bioforsk Fokus* 6 (2) p 96.

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7. Abrahamsen, U., Asalf, B., **Ficke, A**., Le, V. H., Nordskog, B., Jaastad, G., ... Øverland, J. I. 2018. Biologisk veiledningsprøving 2017. Sopp-og skadedyrmidler (Biological testing for farmer guidance 2017. Fungicides and insecticides). *NIBIO Rapport*.

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10. Nærstad, R., Brodal, G., Dobson, A., Eikemo, H., **Ficke, A**., Herrero, M.... Børve, J., 2015. Biologisk veiledningsprøving 2015 Soppmidler (Biological testing for farmer guidance 2015. Fungicides). *NIBIO Rapport.*

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Markdager and farmer's meetings

1. **Ficke, A**. Thöming, G. 2023. Bruk av lukt for varsling og deteksjon av soppsjukdommer og skadedyr (The use of volatiles to warn about and detect fungal diseases and insect pests). Technology day, Apelsvoll Farm, Gjøvik, Norway. 19.09.2023. (https://nibio.no/nyheter/teknologidag-med-fokus-pa-presisjonsjordbruk-innen-plantevern?locationfilter=true).

2. **Ficke, A.** 2023. VIPS models I vårhvete (VIPS models in spring wheat). Markdag i Øsaker, NLR Øst, Sarpsborg, 26.06.2023.

3. **Ficke, A.,** 2023. Sjukdommer i oljevekster og andre korsblomstra vekster i omløp med korn (Diseases in oilseed crops and other brassica crops in rotation with cereals). Lilly Country Club, Kløfta, 16.02.2023.

4. **Ficke, A.,** 2022. Nye varslingsmodeller for bladflekksjukdommer (New risk models for leaf blotch diseases). NLR kursuke, Gardermoen, 15.11.22.

5. **Ficke, A.**, 2022. Årets utfordringer i Plantehelse (The year's challenges in plant health). Plantehelsedag, Vitenparken, Ås, 21.06.2022.

6. **Ficke, A.** 2022. Sjukdommer i korn og oljevekster – tiltak (Diseases in cereals and oilseed crops-management). Markdag Apelsvoll, Gjøvik, 11.08.2022.

7. Grieu, C. & **Ficke, A.** 2022. Gulrust og Bladflekksjukdommer (Yellow rust and leaf blotch diseases). Markdag Apelsvoll, Gjøvik, 11.08.2022.

8. **Ficke, A.,** 2021. Gulrustraser i Norge (Yellow rust races in Norway). Korn 2021. Online meeting on 09.02.2021.

9. **Ficke, A.,** 2020. Gulrustforsøk I vårhvete (Yellow rust trials in spring wheat). Markdag Øsaker, Sarpsborg, 24.06.2020

10. **Ficke, A.,** 2019. Gulrust i Norsk hvete (Yellow rust in Norwegian wheat). Markdag Apelsvoll, Gjøvik 16.08.2019.

11. **Ficke, A.,** 2019. Storknolla Råtesopp. Hva vet vi nå? (Sclerotinia stem rot. What do we know?) Korn 2019. Hotel Olavsgaard, Skedsmo, 15.02.2019.

12. Kusinierek, K., **Ficke, A**., 2019. Kan N-sensor brukes til mer enn å bestemme N-behov? Hva med tørke og sjukdomsstress? (Can the N-sensor be used for more than to determine N-deficiency. What about draught and diseases?). Korn 2019. Hotel Olavsgaard, Skedsmo. 14.02.2019.

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16. **Ficke, A**., Langeland, A. 2015. Sopp i korn- valg av strategi i forhold til middelvalg og risiko for resistens (Fungi in cereals- choosing management strategies in relation to fungicides and risk for resistance development). Planteverndag, Blæstad, 20.05.2015.

Articles in Newspapers and Interviews:

1. Ficke, A., 2023. Ny avgjerdsstøtte for å vurdere risiko for bladflekksjukdommar i kveite (New decision support to evaluate risk for leaf blotch diseases in wheat). Interview with Siri Elise Dybdal, 07.07.2023: https://nibio.no/nyheter/ny-avgjerdsstotte-for-a-vurdere-risiko-for-bladflekksjukdomar-i-kveite?locationfilter=true

2. Evju, I., **Ficke, A**. 2023. Gulrust i Norge- Kommer for å bli? (Yellow rust in Norway- coming to stay?) *Grønt i Fokus* 1 (10) March 2023: 29.

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Instructional Videos:

1. General introduction to integrated pest management in wheat: *Trouble in the wheat field* (English and Norwegian), available at: https://vimeo.com/144864273 and https://www.youtube.com/watch?v=dfBvr6tXV3E.

2. Information video on how to use the 'Humidity model' for estimating risk of leaf blotch diseases in wheat, available at the decision support platform VIPS (www.vips-landbruk.no), and https://vimeo.com/818734601.

3. Video to introduce the PurPest concept available on Youtube (https://www.youtube.com/watch?v=wnclR_-BM1I)

Internet pages:

Responsible to update the national reference webpage on fungal diseases in cereals and oilseed crops (www.plantevernleksikon.no):

Brodal, G. & **Ficke, A.** 2020. Brunrust (*Puccinia triticiana*).

Brodal, G. & **Ficke, A**. 2020. Hvetestripesyke (*Hymenula cerealis*)

Innovative methods in plant health /Innovative metoder innen Plantevern i Landbruk: https://www.nibio.no/tema/plantehelse/innovative-metoder-innen-plantevern-i-landbruket/optisk-og-kjemisk-sensor-teknologi-mot-ugras-og-soppsykdommer?locationfilter=true. 2021