

CURRICULUM VITAE, TATSIANA ESPEVIG

Current position: Researcher (PhD), Norwegian Institute of Bioeconomy Research (NIBIO),
Division of Environment and Natural Resources
Date of Birth: March 1976
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Civil status: Married

WORK EXPERIENCE:

June 2011 – Present: Researcher at Norwegian Institute of Bioeconomy Research (NIBIO), Grimstad (Norway)
October 2007–March 2011: PhD candidate, NIBIO
2006-2007: Seasonal worker, NIBIO
2005-2007: Seasonal worker, J.Kristansen Gartneri AS, Grimstad (Norway)
June 2004- August 2005: Researcher, The Institute of Agriculture and Selection of the National Academy of Science of Belarus, Zodino (Belarus)
January 2003–April 2003 Trainee J. Kristiansen Gartneri AS, Grimstad (Norway)
January 2004–April 2004 Trainee J. Kristiansen Gartneri AS, Grimstad (Norway)
January 1999–April 2002 Operator, Paging company 'Solid', Minsk (Belarus)

EDUCATION:

1993-1998: Biology and Chemistry Teacher, The Belarussian State Pedagogical Maxim Tank University, Minsk (Belarus)
1996-1998: BSc, The Belarussian State Pedagogical Maxim Tank University, Minsk (Belarus)
1998-1999: MSc, The Byelorussian State Pedagogical Maxim Tank University, Minsk (Belarus)
1999-2004: PhD, National Academy of Sciences of Belarus
Main disciplines: Plant morphology and plant anatomy, plant breeding and seed production
Secondary disciplines: philosophy and methodology of science, english, fundamentals of information technologies.
Thesis title: "Use of morphological and anatomical characteristics of cucumber leaf in selection for resistance to Downy Mildew".
2007-2011: PhD, Norwegian University of Life Sciences (UMB), Ås (Norway)
Main discipline: Plant Pathology
Secondary disciplines: Fungal biology, plant health and plant protection, dispersal of plant pathogens, turfgrass pest management.
Thesis title: "Winter hardiness and management of velvet bentgrass (*Agrostis canina*) on golf greens in the Nordic climate".

RESEARCH FIELD:

Integrated pest management, disease diagnostics, winter hardiness, biotic and abiotic stresses, turfgrass establishment and management.

SELECTED PROJECTS:

2017-2020: DOLLAR SPOT: Risk assessment, management and control of dollar spot caused by *Sclerotinia homoeocarpa* on Scandinavian golf courses.
2014-2018: Winter injuries on Golf Greens in the Nordic Countries: Survey of causes and economic consequences
2014-2015: DOLLAR SPOT: Identification and risk assessment for dollar spot caused by *Sclerotinia homoeocarpa* F.T. Benn. on Scandinavian golf courses.
2014-2017: Selection and management of bentgrass cultivars (*Agrostis* spp.) for genetic and induced resistance to microdochium patch and pink snow mold caused by *Microdochium nivale*.
2014-2017: FALL FERTILIZATION: Proper supply of nitrogen and sulfur in the fall for better winter survival of perennial grasses
2014-2015: Greencast validation of anthracnose (*Colletotrichum graminicola*) on golf greens in the nordic region

- 2012-2014: GREENCAST: Evaluation of the GreenCast prediction model for fungicide application against *Microdochium nivale*
- 2011-2014: SCANGREEN: Variety evaluation on Scandinavian golf greens (STERF)
- 2011-2014: MYCORRHIZA GREEN: Competition against annual bluegrass on putting greens with red fescue as predominant species
- 2011-2014: TWS: Better turfgrass survival in a changing winter climate
- 2011-2014: BIO-NIVALE: Evaluation of alternative products for control of *Microdochium nivale*
- 2007-2011: VELVET GREEN: Potential for velvet bentgrass on Nordic golf greens

INTERNATIONAL INTERNSHIP:

- 2009: Rutgers, The State University of New Jersey, New Brunswick, USA
(contact persons: Professor Bingru Huang, Professor Bruce B. Clarke, Richard J. Buckley)
University of Massachusetts, Amherst, USA (contact person: Dr. Michelle Da Costa)
(6-mo collaboration and internship)
- 2012: Gabriel Lippman Center, Luxembourg.
(1-mo stay and collaboration with Dr. Hausman)

SELECTED PUBLICATIONS:

Peer-reviewed papers in international journals

- Waalén W.M., T. Espevig, A. Kvalbein and T.S. Aamlid. 2017. The effect of ice encasement and two protective covers on the winter survival of six turfgrass species/subspecies on newly established putting greens. *Int. Turfgrass Soc. Res. J.* 13:556-565.
- Kvalbein A., W.M. Marie Waalen, L. Bjørnstad, T.S. Aamlid and T. Espevig. 2017. Winter injuries on golf greens in the Nordic countries: Survey of causes and economic consequences. *Int. Turfgrass Soc. Res. J.* 13:604-609.
- Espevig T., M. B. Brurberg, M. Usoltseva, Å. Dahl, A. Kvalbein, K. Normann, and J. A. Crouch. 2017. First report of dollar spot disease, caused by *Sclerotinia homoeocarpa*, of *Agrostis stolonifera* in Sweden. *Crop Sci.* 57:349-353.
- Espevig T., M. B. Brurberg and A. Kvalbein. 2015. First Report of Dollar Spot, Caused by *Sclerotinia homoeocarpa*, of Creeping Bentgrass in Norway. *Plant Disease* 99:287.
- Calvache, S., T. Espevig, T.E. Andersen, E. Joner, A. Kvalbein, T. Pettersen & T.S. Aamlid 2016. Nitrogen, Phosphorus, Mowing Height, and Arbuscular Mycorrhiza Effects on Red Fescue and Mixed Fescue–Bentgrass Putting Greens. *Crop Science* doi:10.2135/cropsci2016.04.0240
- Espevig T., M. Höglind and T. S. Aamlid. 2014. Dehardening resistance of six turfgrasses used on golf greens. *Environ. Exp. Bot.* 106:182-188.
- Tronsmo A., T. Espevig, L. Hjeljord, and T.S. Aamlid. 2013. Evaluation of freezing tolerance and susceptibility to *Microdochium nivale* of velvet bentgrass cultivars in controlled environments. *Int. Turfgrass Soc. Res. J.* 12:69-80.
- Espevig T., C. Xu, T.S. Aamlid, M. DaCosta, and B. Huang. 2012. Proteomic responses during cold acclimation in association with freezing tolerance of velvet bentgrass. *J. Amer. Soc. Hort. Sci.* 137:391-399.
- Espevig T., B. Molteberg, A. M. Tronsmo, A. Tronsmo, and T. S. Aamlid. 2012. Thatch control in newly established velvet bentgrass putting greens in Scandinavia. *Crop Sci.* 52: 371-382.
- Espevig T. and T.S. Aamlid. 2012. Effects of rootzone composition and irrigation regime on performance of velvet bentgrass putting greens. I. Turf quality, soil water repellency, and nutrient leaching. *Acta Agric. Scan.* 62:96-105.
- Espevig T. and T.S. Aamlid. 2012. Effects of root zone composition and irrigation regime on performance of velvet bentgrass putting greens. II. Thatch, root development, and playability. *Acta Agric. Scan.* 62:106-112.
- Espevig, T., M. DaCosta, L. Hoffman, T. S. Aamlid, A. M. Tronsmo, B. B. Clarke, and B. Huang. 2011. Freezing tolerance and carbohydrate changes of two *Agrostis* species during cold acclimation. *Crop Science* 51:1188-1197.
- Aamlid, T.S., T. Espevig, B. Molteberg, A. Tronsmo, O.M. Eklo, I.S. Hofgaard, G.H. Ludvigsen & M. Almvik 2009. Disease control and leaching potential of fungicides on golf greens with and without organic amendment to the sand-based root zone. *International Turfgrass Research Journal* 11, 903-917.
- Aamlid, T.S., T. Espevig & A. Kvalbein 2009. The potential of a surfactant to restore turfgrass quality on a severely water-repellent golf green. *Biologia* 64, 620-623.
- Espevig, T.E. 2011. Winter hardiness and management of velvet bentgrass (*Agrostis canina*) on golf greens in the Nordic climate. Ph.D. diss. Norwegian Institute for Agricultural and Environmental Research, Norwegian University of Life Sciences, Ås, Norway.

Abstracts and conference proceedings

- Entwistle K., T. Espevig, J. A. Crouch, K. Normann and M. Usoltseva. 2018. The effect of temperature on the *in vitro* growth rate of *Sclerotinia homoeocarpa* isolates of different origin. p. 14-15. In S. Brown et al. (ed.) Different shades of green. Eur. Turfgrass Soc. Conf., 6th, Manchester, UK. 2-4 July 2018. Eur. Turfgrass Soc. Quinto Vicentino, Italy. ISBN:978-3-88579-568-1
- Espevig T., K. Normann, S. Nilsson, N. Bosholdt and M. Usoltseva. 2018. Rolling reduces dollar spot on golf greens in Nordic countries. p. 18-19. In S. Brown et al. (ed.) Different shades of green. Eur. Turfgrass Soc. Conf., 6th, Manchester, UK. 2-4 July 2018. Eur. Turfgrass Soc. Quinto Vicentino, Italy. ISBN:978-3-88579-568-1
- Espevig T., T.S. Aamlid, T.O. Pettersen and A. Kvalbein. 2018. Effect of nitrogen in late autumn on microdochium patch on Nordic golf greens. p. 16-17. In S. Brown et al. (ed.) Different shades of green. Eur. Turfgrass Soc. Conf., 6th, Manchester, UK. 2-4 July 2018. Eur. Turfgrass Soc. Quinto Vicentino, Italy. ISBN:978-3-88579-568-1
- Aamlid T.S., T. Espevig, A.A. Steensohn and E.U. Dahl. 2018. Resistance to *Microdochium nivale* and abiotic damage as affected by Civitas One™ in a selection of creeping bentgrass cultivars. p. 66-67. In S. Brown et al. (ed.) Different shades of green. Eur. Turfgrass Soc. Conf., 6th, Manchester, UK. 2-4 July 2018. Eur. Turfgrass Soc. Quinto Vicentino, Italy. ISBN:978-3-88579-568-1
- Aamlid, T.S., T. Espevig & A. Tronsmo 2016. Microbial products for control of *Microdochium nivale* on golf greens. In: Book of Abstracts of the 5th European Turfgrass Society Conference. June 5-8th, Salgados, Albufeira, Portugal. pp. 147-148.
- Calvache, S., T. Espevig, E. Joner, T.E. Andersen, T. Pettersen & T.S. Aamlid 2016. Effects of nitrogen, phosphorus, mowing height and mycorrhiza inoculation on turf quality and competition against annual bluegrass on pure red fescue and mixed fescue/bentgrass golf greens. In: Book of Abstracts of the 5th European Turfgrass Society Conference. June 5-8th, Salgados, Albufeira, Portugal. pp.103-104.
- Aamlid, T.S., T. Espevig & A. Tronsmo 2016. Microbial products for control of *Microdochium nivale* on golf greens. In: Book of Abstracts of the 5th European Turfgrass Society Conference. June 5-8th, Salgados, Albufeira, Portugal. pp. 147-148.
- Espevig T., A. Tronsmo and T.S. Aamlid. 2014. Evaluation of microbiological agents for control of *Microdochium nivale in vitro*. P. 49-50. In A. Zuin and K. Mueller-Beck. (ed.) Eur. J. Turfgrass Sci (Special Edition). European Turfgrass Society Conference, 4th, Osnabrueck, Germany. 6-9 July 2014. (ISSN 1867-3570)
- Espevig T., T.E. Andersen, A. Kvalbein, E. Joner and T.S. Aamlid. 2014. Mycorrhizal colonization and competition against annual bluegrass on golf greens with red fescue as the predominant species. P. 41-42. In A. Zuin and K. Mueller-Beck. (ed.) Eur. J. Turfgrass Sci (Special Edition). European Turfgrass Society Conference, 4th, Osnabrueck, Germany. 6-9 July 2014. (ISSN 1867-3570)
- Espevig T., A. Tronsmo, L. Hjeljord, B. Huang, C. Xu, M. DaCosta, B.B. Clarke, A. M. Tronsmo, and T.S. Aamlid. 2012. Evaluation of resistance to pink snow mold of velvet bentgrass cultivars in controlled environments. p. 43-44. In A. Zuin and T.S. Aamlid (ed.) Bioforsk Fokus: Quality Turf and Efficient Utilization of Resources. Reviewed abstracts. European Turfgrass Society Conference, 3rd, Kristiansand, Norway. 24-26 June 2012.
- Espevig E., A.M. Tronsmo, A. Tronsmo, and T. S. Aamlid. 2012. Thatch control on newly established velvet bentgrass putting greens. p. 87-89. In A. Zuin and T.S. Aamlid (ed.) Bioforsk Fokus: Quality Turf and Efficient Utilization of Resources. Reviewed abstracts. European Turfgrass Society Conference, 3rd, Kristiansand, Norway. 24-26 June 2012.
- Espevig T., M. Dacosta, T.S. Aamlid, A.M. Tronsmo, B.B. Clarke, and B. Huang. 2010. Effects of cold acclimation on freezing tolerance and carbohydrate changes in *Agrostis* spp. p.72-75. In M. Volterrani (ed.) Proc. Eur. Turfgrass Soc. Conf., 2nd, Angers, France. 11-14 April 2010. Angers.
- Espevig T., M. Dacosta, T.S. Aamlid, A.M. Tronsmo, B.B. Clarke, and B. Huang. 2010. Effects of cold acclimation on freezing tolerance and carbohydrate changes in *Agrostis* spp. p.72-74. In M. Volterrani (ed.) Proc. Eur. Turfgrass Soc. Conf., 2nd, Angers, France. 11-14 April 2010.
- Espevig T., Pettersen T.O., Aamlid T.S., Tronsmo A., and Tronsmo A.M. 2009. Effect of acclimation conditions on freezing survival of *Agrostis* spp. p. 26. In Abstract book. Plant and Microbe Adaptation to the Cold. 4-8 Dec. 2009. Ås, Norway
- Tronsmo A., Espevig., Jensen K.G., Hjeljord L., and T.S. Aamlid. 2008. Potential for *Agrostis canina* on Scandinavian Putting Greens as tested under controlled conditions. p. 185-186. In Simone Magni (ed.) Proc. 1st, Eur. Turfgrass Soc. Conf., Pisa, Italy. 19-20 May 2008. Stamperia Editoriale Pisana.

Reports

- Espevig T., T.S. Aamlid and T. Pettersen. 2018. Effect of fertilizer type, silicon and copper on turf quality and microdochium infection on *Poa annua* putting green. Annual report. STERF Research and development yearbook 2017. p. 24-25.

- Sandell B., T.S. Aamlid, T. Espevig and T. Pettersen. 2018. Testing the effect of Algagreen on winter stress tolerance. Annual report. STERF Research and development yearbook 2017. p. 26-27.
- Sandell B., W. Waalen, T.S. Aamlid and T. Espevig. 2018. Optimal application of nitrogen and sulphur in autumn for better winter survival of perennial grasses with emphasis on turf. Annual report. STERF Research and development yearbook 2017. p. 18-19.
- Aamlid T.S., T. Espevig, P. Heltoft, A. Kvalbein, K. Paaske, O. Niemelainen, P. Ruttunen, A. Kedonpara, T. Hsiang and A. Bertrand. 2018. Selection and management of bentgrass cultivars (*Agrostis* spp.) for genetic and induced resistance to microdochium patch and pink snow mould caused by *Microdochium nivale*. Annual report. STERF Research and development yearbook 2017. p. 30-31.
- Espevig T., A. Kvalbein and B. Sandell. 2018. Fairy rings and thatch collapse. Annual report. STERF Research and development yearbook 2017. p. 32-33.
- Espevig T., K. Normann, M. Usoltseva, J.A. Crouch and K. Entwistle. 2018. Risk assessment, management and control of dollar spot caused by *Sclerotinia homoeocarpa* on Scandinavian golf courses. Annual report. STERF Research and development yearbook 2017. p. 34-35.
- Espevig T. and T.S. Aamlid. 2018. Winter damage to golf greens in the Nordic countries: Survey of causes and economic consequences (Part II). Annual report. STERF Research and development yearbook 2017. p. 42-43.
- Espevig T., T. O. Pettersen and T. S. Aamlid. 2014. Validation of the GreenCast prediction model for microdochium patch on golf greens in the Nordic region. Results from the second validation year. *Bioforsk Report* 9 (43): 37 p.
- Espevig, T., T.S. Aamlid, A. Tronsmo, B. Molteberg, L. Hjeljord, A.M. Tronsmo, T. Pettersen, and F. Enger. 2009. Winter hardiness and management of velvet bentgrass (*Agrostis canina*) on putting greens on northern environments. Report from the second experimental year 2008. *Bioforsk Rapport* 4 (100): 1-54.
- Espevig T., T. S. Aamlid, A. Tronsmo, K.G. Jensen, B. Molteberg, L. Hjeljord, A.M. Tronsmo, Å. Susort, and F. Enger. 2008. Winter hardiness and management of velvet bentgrass (*Agrostis canina*) on putting greens in northern environments. Report from the first experimental year 2007. *Bioforsk Report* 3 (30): 33 p.
- Aamlid, T.S., T. Espevig, A. Tronsmo & K. Paaske, L. Wiik, T. Pettersen, A.A. Steensohn, O. Hetland, A.M.D. Jensen & P.G. Andersson 2014. Testing of alternative plant protection products for the control of *Microdochium nivale* and other diseases on golf greens. Final report from a three year project, Oct. 2011- Sep. 2014. *Bioforsk Report* 9 (115): 1-54

Popular scientific publications

- Espevig T. og T.S. Aamlid. 2018. Winter diseases: Biotic winter damage. STERF Handbook turf grass winter survival. 9 p. <http://www.sterf.org/Media/Get/3123/winter-diseases-biotic-winter-damage>
- Økland I., A. Kvalbein, W.M. Waalen, L. Bjørnstad, T.S. Aamlid and T. Espevig. 2018. Winter injuries on golf greens in the Nordic countries (part 2). Survey of causes and economic consequences. Popular Scientific Article - STERF. 12 pp. <http://www.sterf.org/Media/Get/3087/survey-winter-injuries-part2>
- Kvalbein A., T. Espevig, W. Waalen, and T.S. Aamlid. 2017. Turf grass winter stress management. Golf course managers' handbook. STERF. <http://www.sterf.org/Media/Get/2892/winter-stress-mgmt-handbook>
- Kvalbein, A. T. Espevig, W. Waalen & T.S. Aamlid. 2016. Acclimation and winter stresses. What is killing our golf greens? (parallellutgave ENG/NO). Fact sheet winter survival. www.sterf.org.
- Kvalbein, A. T. Espevig & T.S. Aamlid 2016. Warm spells during the winter. (Parallellutgave ENG/NO). Fact sheet winter survival. www.sterf.org.
- Kvalbein, A. T. Espevig, W. Waalen & T.S. Aamlid 2016. Re-seeding and spring recovery from winter injuries. (Parallellutgave ENG/NO). Fact sheet winter survival. www.sterf.org.
- Kvalbein, A. T. Espevig, W. Waalen & T.S. Aamlid 2016. Winter protective covers. Usage of wraps to improve winter survival of golf greens. (Parallellutgave ENG/NO). Fact sheet winter survival. www.sterf.org.

TEACHING:

Responsible for a series of five lectures regarding winter stress of turfgrasses and turfgrass pest management for the Norwegian Greenkeepers Association, 9-16 Jan. 2014.

MSC / BSC SUPERVISOR:

Andersen T.E. 2013. Effects of root zone composition and nitrogen and phosphorus rates on mycorrhizal colonization in different turfgrass species on sand-based golf greens in Scandinavia. MSc thesis. Norwegian Univ. of Life Sci., Ås, Norway.

Anita Ejderdun 2014-2015. Riskbedömning av skandinaviska isolat av *Sclerotinia homoeocarpa* vid olika klimat. BSc student, University of Gävle, Sweden.