

Short Biography of Dr. Athyna Cambouris

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Studies

B.S.A. (1989), Bio-agronomy, Laval University, Quebec, Canada

Ph.D. (2007) Soil and Environment Department, Laval University, Quebec City, Canada

Short biography

Dr. Cambouris is the outgoing vice-leader of the Precision Nitrogen Management Community of the International Society for Precision Agriculture (ISPA). She leads an important research program for the Government of Canada and she is known for his ability to generate new knowledge for the benefit of the agricultural sector mainly related to precision agriculture and potato production. Dr. Cambouris is currently involved in variable rate management of N applications mainly under potato production involving soil and crop sensor systems, remote sensing, geomatics and geostatistics. She conducts research on the delineation of management zones based on the soil and crop sensor systems for potato, corn, switchgrass and forage production. Her expertise with soil sensors related to the spatial variability of soil properties is also well known.

She has supervised more than six M.Sc. and two Ph.D. students and one postdoc. Actually, she leads a team of two research assistants, and six Ph.D. in co-supervision. Dr. Cambouris is adjunct-professor at Laval University and at the *Institut National de recherche – Eau – terre – Environnement de Québec*.

She is main investigator of the Potato Cluster project entitled “Enhancement of Canadian Potato Industry through Smart Farming” involving all Eastern Canada provinces. She is also part of the Living Lab project in Prince Edward Island where she implemented precise Nitrogen management using the approach of PA (management zone, variable rate applications and UAV imagery).

Since 2007, she is President of the *Commission de géomatique agricole et agriculture de précision* which is the official expert committee for Precision Agriculture in Quebec. Training for growers and agronomists is the corner stone of precision agriculture. Dr Cambouris is one of the leaders with the *Commission de géomatique agricole et agriculture de précision* of a 3-day training in Precision agriculture and geomatics in the province of Quebec. Those 3-day trainings are offered periodically all year round since 2018. Dr. Cambouris

has organized four Conferences on Precision Agriculture for the *Commission de géomatique agricole et agriculture de précision* and chaired the organizing committee (2010, 2014, 2018, and 2020). She is member of the: American Society of Agronomy (ASA), Soil Science Society of America (SSSA), and the *Association Québécoise des Spécialistes en Sciences du Sol* (AQSSS).

Selected papers

- Zebarth, B.J., Monirul Islam, M., **Cambouris, A.N.**, Perron, I., Burton, D.L., Comeau, L.P., Moreau, G. 2019. Spatial variation of soil health indices in a commercial potato field in Eastern Canada. *Soil Sci. Soc. Amer. J.* 83 : 1786-1798. doi:10.2136/sssaj2019.03.0087.
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- Perron, I., **A.N. Cambouris**, Chokmani, K., M.F. Vargas Gutierrez, B.J. Zebarth, G. Moreau, A. Biswas, V. Adamchuk, 2018. Delineating soil management zones using a proximal soil sensing system in two commercial potato fields in New Brunswick, Canada. *Can J. Soil Sci.* 98(4): 724-737, <https://doi.org/10.1139/cjss-2018-0063>
- Alotaibi, K.D., **A.N. Cambouris**, M. St. Luce, N. Ziadi, N. Tremblay. 2018. Economic Optimum Nitrogen Fertilizer Rate and Residual Soil Nitrate as Influenced by Soil Texture in Corn Production. *Agron. J.* 110(6), 2233-2242. 10.2134/agronj2017.10.0583
- Cambouris, A.N.**, A.J. Messiga, N. Ziadi, I. Perron, C. Morel. 2017. Decimetric-Scale Two-Dimensional Distribution of Soil Phosphorus after 20 Years of Tillage Management and Maintenance Phosphorus Fertilization. *Soil Science Society of America Journal*.
- Bélanger, G., **A.N. Cambouris**, G. Parent, D. Mongrain, N. Ziadi, I. Perron. 2017. Biomass yield from an old grass field as affected by sources of nitrogen fertilization and management zones in northern areas. *Canadian Journal of Plant Science* 97(1): 53-64.
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- Morissette, R., Jégo, G., Bélanger, G., **Cambouris, A.N.**, Nyiraneza, J., and Zebarth, B.J. 2016. Simulating potato growth and nitrogen uptake in Eastern Canada with the STICS model. *Agronomy Journal*, 108(5): 1853–1868. DOI: 10.2134/agronj2016.02.011
- Cambouris, A.N.**, St. Luce, M., Zebarth, B.J., Ziadi, N., Grant, C.A., Perron, I. 2016. Potato response to nitrogen sources and rates in an irrigated sandy soil. *Agron. J.* 108(1): 391–401. doi : 10.2134/agronj2015.0351
- Bélanger, G., **Cambouris, A.N.**, Parent, G., Mongrain, D., Ziadi, N. Perron, I. 2016. Biomass yield from an old grass field as affected by sources of nitrogen fertilization and management zones in northern areas. *Can. J. Plant Sci.* 97: 1–12 (2017) dx.doi.org/10.1139/cjps-2016-0084
- Morier, T., **Cambouris, A.N.**, Chokmani, K. 2015. In-season nitrogen status assessment and yield estimation using hyperspectral vegetation indices in a potato crop. *Agron. J.* 107(4): 1295–1309. Doi : 10.2134/agronj14.0402
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- Allaire, S.E., **Cambouris, A.N.**, Lafond, J.A., Lange, S.F., Pelletier, B., Dutilleul, P. 2014. Spatial variability of potato tuber yield and plant nitrogen uptake related to soil properties. *Agron. J.* 106: 851–859.
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