

**Výzkumný ústav rostlinné výroby, v.v.i.
Odbor systémů hospodaření na půdě
výzkumný tým Integrované výživy rostlin**



**Vás srdečně zve na odborný seminář
pořádaný dne 1. 3. 2016**

**hlavní přednáška:
Prof. Robert Bradley
(Universita Sherbrooke, Kanada)**



Program:

- 13:00** Zahájení, Dr. Ing. Pavel Čermák, ředitel VÚRV, v.v.i.
13:05 Prezentace výsledků týmu Integrované výživy rostlin,
Ing. G. Mühlbachová, Ph.D., Ing. H. Kusá, Ph.D.
13:15 Tree-based Intercropping in Eastern Canada: Towards a New
Paradigm in Food Production, Prof. Robert Bradley
(přednáška v angličtině)

Místo konání:

**VÚRV, v.v.i., Drnovská 507/73, Praha 6 – Ruzyně
Hlavní budova, zasedací místnost č. 303**

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Tree-based intercropping in Eastern Canada: Towards a new paradigm in food production.



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Temperate agroforestry systems are largely missing from the Canadian landscape. During 2004-2015, colleagues and I obtained 5 grants (1.72 M\$) to determine the economic and environmental benefits of tree-based intercropping (TBI) systems in Canada. Research plots were established on 4 pilot study sites in the provinces of Quebec and Ontario, in order to assess the effects of tree-row spacing, annual intercrop rotation and alternative soil management regimes on intercrop yields, tree growth, environmental impacts and soil quality. These projects trained 18 graduate students and produced 16 scientific articles, 4 policy papers, 2 technical reports, 2 book chapters, 4 national workshops, 2 videos and various interviews. Notable findings include (i) a 3-fold decrease in soil N₂O emissions compared to agricultural monocropping of *Brassica sp.*; (ii) a Land Equivalency Ratio of 2.4x in soybean–poplar TBI systems; (iii) a 12% increase in soil C storage over 20 years; (iv) a 2-fold increase in AM fungal biomass; (v) large reductions in soil NO₃⁻ leaching; (vi) reduced diffusion of atrazine in soils; (vii) higher diversity and stability of soil microbial biomass. Furthermore, TBI systems are a novel approach for increasing the supply of high-valued hardwoods, increasing biodiversity, giving value to marginal agricultural lands and increasing landscape connectivity for wildlife.