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Department of Agricultural Sciences  
Helsinki Institute of Sustainability Science (HELSUS)  
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Legume science  
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## Curriculum vitae

Previous employment  
Department of Applied Biology, University of Helsinki, Finland  
Visiting Scientist 06.08.2005 – 31.01.2007  
School of Applied Sciences, University of Wolverhampton, UK  
Professor of Crop Improvement 01.08.2004 – 01.08.2005  
Reader 04.01.2001 – 31.07.2004  
Plant Breeding Institute, The University of Sydney and the Quality Wheat CRC Ltd, Australia  
Senior Research Fellow 01.09.1998 – 01.01.2001  
Research Fellow 01.07.1995 – 01.09.1998  
Plant Breeding Institute, The University of Sydney, Australia  
Research Fellow 01.01.1992 – 30.06.1995  
Department of Plant Sciences, The University of Adelaide, Australia  
Research Fellow 01.05.1988 – 31.12.1991  
Research Associate 05.12.1985 – 30.04.1988  
Education and training  
University of Cambridge and Plant Breeding Institute, Cambridge, UK 1981-1985  
PhD, 08.06.1985  
*Project:* Fertilisation in *Vicia faba* L. in relation to breeding objectives  
*Scholarships:* Imperial Oil (Canada) Graduate Research Fellowship; St. John's College (Cambridge) Benefactor's Studentship  
University of Ottawa, Ottawa, Canada 1978-1981  
MSc (Biology), 25.05.1981  
*Scholarship:* Centennial Science Scholarship, Natural Sciences and Engineering Research Council of Canada  
Carleton University, Ottawa, Canada 1974-1978  
BSc (First Class Honours in Biology), 1978; University Medal in Science 1978

## Qualifications

Plant Breeding, PhD, University of Cambridge  
Biology, MSc, University of Ottawa  
Biology, BSc (First Class Honours), Carleton Univ, Carleton University, Dept Biol

## Principal Investigator

Period : 14.06.2010 - \* in Department of Agricultural Sciences

## Employment

### University Lecturer

Department of Agricultural Sciences  
University of Helsinki  
Finland

1 Jan 2010 → present

### **Helsinki Institute of Sustainability Science (HELSUS)**

University of Helsinki

Helsingin yliopisto, Finland

1 Jan 2018 → present

### **Viikki Plant Science Centre (ViPS)**

University of Helsinki

1 Jan 2014 → present

### **Crop Science Research Group**

University of Helsinki

1 Feb 2007 → present

### **Group Leader**

Legume science

University of Helsinki

1 Feb 2007 → present

### **Plant Production Sciences**

University of Helsinki

1 Feb 2007 → present

### **Supervisor for doctoral programme**

Doctoral Programme in Food Chain and Health

University of Helsinki

1 Jan 2014 → present

### **Supervisor for doctoral programme**

Doctoral Programme in Plant Sciences

University of Helsinki

Helsinki, Finland

1 Jan 2014 → present

### **Supervisor for doctoral programme**

Doctoral Programme in Sustainable Use of Renewable Natural Resources

University of Helsinki

Helsinki, Finland

1 Jan 2014 → present

## **Research outputs in refereed journals**

### **Eliminating vicine and convicine, the main anti-nutritional factors restricting faba bean usage**

Khazaei, H., Purves, R. W., Hughes, J., Link, W., O'Sullivan, D. M., Schulman, A. H., Björnsdotter, E., Geu-Flores, F., Nadziejka, M., Andersen, S. U., Stougaard, J., Vandenberg, A. & Stoddard, F. L., 2 Aug 2019, In : Trends in Food Science & Technology. 91, p. 549-556 8 p.

### **Genotypic variation in leaf epicuticular wax quantity in a large faba bean (*Vicia faba* L.) germplasm collection**

Khazaei, H., Santanen, A., Street, K. & Stoddard, F. L., Jun 2019, In : Plant Genetic Resources. 17, 3, p. 298-300 3 p., 1479262118000461.

### **Plant species and growing season weather influence the efficiency of selenium biofortification**

Ebrahimi, N., Stoddard, F. L., Hartikainen, H. & Seppanen, M. M., Jun 2019, In : Nutrient Cycling in Agroecosystems. 114, 2, p. 111-124 14 p.

**Responses of flavonoid profile and associated gene expression to solar blue and UV radiation in two accessions of *Vicia faba* L. from contrasting UV environments**

Yan, Y., Stoddard, F. L., Neugart, S., Sadras, V. O., Lindfors, A., Morales, L. O. & Aphalo, P. J., 1 Feb 2019, In : Photochemical & Photobiological Sciences. 18, 2, p. 434-447 14 p.

**Grain legume yields are as stable as other spring crops in long-term experiments across northern Europe**

Reckling, M., Döring, T. F., Bergkvist, G., Stoddard, F. L., Watson, C. A., Seddig, S., Chmielewski, F.-M. & Bachinger, J., Dec 2018, In : Agronomy for Sustainable Development. 38, 6, 10 p., 63.

**A multi-parent faba bean (*Vicia faba* L.) population for future genomic studies**

Khazaei, H., Stoddard, F. L., Purves, R. W. & Vandenberg, A., Oct 2018, In : Plant Genetic Resources. 16, 5, p. 419-423 5 p.

**David Bond and Jean Picard: Two pivotal breeders of faba bean in the 20th century**

Duc, G. & Stoddard, F., Oct 2018, In : Plant Genetic Resources. 16, 5, p. 483-487 5 p.

**ILB 938, a valuable faba bean (*Vicia faba* L.) accession**

Khazaei, H., Link, W., Street, K. & Stoddard, F. L., Oct 2018, In : Plant Genetic Resources. 16, 5, p. 478-482 5 p.

**Diversity in root growth responses to moisture deficit in young faba bean (*Vicia faba* L.) plants**

Belachew, K. Y., Nagel, K., Fiorani, F. & Stoddard, F. L., 21 Feb 2018, In : PeerJ. 6, p. 1-20 20 p., 4401.

**Rust resistance in faba bean (*Vicia faba* L.): status and strategies for improvement**

Ijaz, U., Adhikari, K. N., Stoddard, F. L. & Trethowan, R. M., Jan 2018, In : Australasian Plant Pathology. 47, 1, p. 71-81 11 p.

**Cultivating forage maize for biomass and bioenergy in a sub-boreal climate**

Epie, K. E., Artigas, O. M., Santanen, A., Mäkelä, P. S. A. & Stoddard, F. L., 2018, In : Agricultural and Food Science. 27, 3, p. 190-198 9 p.

**Fertilizer and intercropped legumes as nitrogen source for Jerusalem artichoke (*Helianthus tuberosus* L.) tops for bioenergy**

Epie, K. E., Santanen, A., Makela, P. S. A. & Stoddard, F. L., 2018, In : Agricultural and Food Science. 27, 3, p. 199-205 7 p.

**Ion beam irradiation mutagenesis in rye (*Secale cereale* L.), linseed (*Linum usitatissimum* L.) and faba bean (*Vicia faba* L.)**

Khazaei, H., Mäkelä, P. S. A. & Stoddard, F. L., 2018, In : Agricultural and Food Science. 27, 3, p. 146-151 7 p.

**Development and validation of a robust, breeder-friendly molecular marker for the *vc(-)* locus in faba bean**

Khazaei, H., Purves, R. W., Song, M., Stonehouse, R., Bett, K. E., Stoddard, F. L. & Vandenberg, A., Nov 2017, In : Molecular Breeding. 37, 11, 6 p., 140.

**Climate change can affect crop pollination in unexpected ways**

Stoddard, F. L., May 2017, In : Journal of Experimental Botany. 68, 8, p. 1819-1821 3 p.

**Proposal for C-Hordein as Reference Material in Gluten Quantification**

Huang, X., Kanerva, P., Salovaara, H., Stoddard, F. L. & Sontag-Stroh, T., 15 Mar 2017, In : Journal of Agricultural and Food Chemistry. 65, 10, p. 2155-2161 7 p.

**Screening of faba bean (*Vicia faba* L.) accessions to acidity and aluminium stresses**

Belachew, K. Y. & Stoddard, F. L., 8 Feb 2017, In : PeerJ. 5, p. e2963, 1-19 19 p., PeerJ 5:e2963.

**Progress towards flowering of faba bean (*Vicia faba* L.) is more than photothermal**

Lizarazo Torres, C. I., Isotalo, J. M., Lindfors, A. & Stoddard, F. L., 9 Jan 2017, In : Journal of Agronomy and Crop Science. 203, 5, p. 385-396 12 p.

**Oxidation of proline decreases immunoreactivity and alters structure of barley prolamin**

Huang, X., Sontag-Strohm, T., Stoddard, F. L. & Kato, Y., 1 Jan 2017, In : Food Chemistry. 214, p. 597-605 9 p.

**Grain legume production and use in European agricultural systems**

Watson, C. A., Reckling, M., Preissel, S., Bachinger, J., Bergkvist, G., Kuhlman, T., Lindström, A. K., Nemecek, T., Topp, C. F. E., Vanhatalo, A. O., Zander, P., Murphy-Bokern, D. & Stoddard, F. L., 2017, In : Advances in Agronomy. 144, p. 235-303 69 p.

**Grain legume decline and potential recovery in European agriculture: a review**

Zander, P., Amjath-Babu, T. S., Preissel, S., Reckling, M., Bues, A., Schlaefke, N., Kuhlman, T., Bachinger, J., Uthes, S., Stoddard, F., Murphy-Bokern, D. & Watson, C., Jun 2016, In : Agronomy for Sustainable Development. 36, 2, 20 p., 26.

**Trade-Offs between Economic and Environmental Impacts of Introducing Legumes into Cropping Systems**

Reckling, M., Bergkvist, G., Watson, C. A., Stoddard, F. L., Zander, P. M., Walker, R. L., Pristeri, A., Toncea, I. & Bachinger, J., 23 May 2016, In : Frontiers in plant science. 7, 15 p., 669.

**A cropping system assessment framework-Evaluating effects of introducing legumes into crop rotations**

Reckling, M., Hecker, J.-M., Bergkvist, G., Watson, C. A., Zander, P., Schlaefke, N., Stoddard, F. L., Eory, V., Topp, C. F. E., Maire, J. & Bachinger, J., May 2016, In : European Journal of Agronomy. 76, p. 186-197 12 p.

**In silico evaluation of plant genetic resources to search for traits for adaptation to climate change**

Bari, A., Khazaei, H., Stoddard, F. L., Street, K., Sillanpää, M. J., Chaubey, Y. P., Dayanandan, S., Endresen, D. T. F., De Pauw, E. & Damania, A. B., Feb 2016, In : Climatic Change. 134, 4, p. 667-680 14 p.

**A SNP-based consensus genetic map for synteny-based trait targeting in faba bean (*Vicia faba* L.)**

Webb, A., Cottage, A., Wood, T., Khamassi, K., Hobbs, D., Gostkiewicz, K., White, M., Khazaei, H., Ali, M., Street, D., Duc, G., Stoddard, F. L., Maalouf, F., Ogonnaya, F. C., Link, W., Thomas, J. & O'Sullivan, D. M., Jan 2016, In : Plant biotechnology journal. 14, 1, p. 177-185 9 p.

**Faba bean flavour and technological property improvement by thermal pre-treatments**

Jiang, Z., Pulkkinen, M. J., Wang, Y., Lampi, A.-M., Stoddard, F. L., Salovaara, H. O., Piironen, V. I. & Sontag-Strohm, T. S., 2016, In : LWT-Food Science and Technology. 68, p. 295-305 11 p.

**Pre-crop effects on the nutrient composition and utilization efficiency of faba bean (*Vicia faba* L.) and narrow-leaved lupin (*Lupinus angustifolius* L.)**

Lizarazo Torres, C. I., Yli-Halla, M. J. & Stoddard, F. L., 27 Nov 2015, In : Nutrient Cycling in Agroecosystems. 103, 2, p. 311-327 17 p.

**Perennial crop growth in oil-contaminated soil in a boreal climate**

Yan, L., Penttinen, P. J., Simojoki, A. J., Stoddard, F. L. & Lindström, A. K., 1 Nov 2015, In : Science of the Total Environment. 532, p. 752-761 10 p.

**The future of lupin as a protein crop in Europe**

Lucas, M. M., Stoddard, F. L., Annicchiarico, P., Frias, J., Martinez-Villaluenga, C., Sussmann, D., Duranti, M., Seger, A., Zander, P. M. & Pueyo, J. J., 8 Sep 2015, In : Frontiers in plant science. 6, 6 p., 705.

**Effects of break crops on yield and grain protein concentration of barley in a Boreal climate**

Zou, L., Yli-Halla, M. J., Stoddard, F. L. & Mäkelä, P. S. A., 15 Jun 2015, In : PLoS One. 10, 6, 13 p., 0130765.

**Flanking SNP markers for vicine-convicine concentration in faba bean (*Vicia faba* L.)**

Khazaei, H., O'Sullivan, D. M., Jones, H., Pitts, N., Sillanpää, M. J., Pärssinen, P., Manninen, O. & Stoddard, F. L., Jan 2015, In : *Molecular Breeding*. 35, 1, 6 p., 38.

**Determination of vicine and convicine from faba bean with an optimized high-performance liquid chromatographic method**

Pulkkinen, M. J., Gautam, M. D., Lampi, A-M., Ollilainen, V-M., Stoddard, F. L., Sontag-Strohm, T. S., Salovaara, H. O. & Piironen, V. I., 2015, In : *Food Research International*. 76, 1, p. 168-177 10 p.

**Earthworm communities under boreal grass and legume bioenergy crops in pure stands and mixtures**

Epie, K. E., Cass, S. & Stoddard, F. L., 2015, In : *Pedobiologia*. 58, 1, p. 49-54 6 p.

**Fusarium-suppressive effects of green manure of turnip rape**

Zou, L., Tuulos, A. P., Mikkonen, A. S., Stoddard, F. L., Lindström, A. K., Kontro, M. H., Koponen, H. K. & Mäkelä, P. S. A., 2015, In : *European Journal of Soil Biology*. 69, p. 41-51 11 p.

**Nitrous oxide emissions from perennial grass-legume intercrop for bioenergy use**

Epie, K. E., Saikkonen, L., Santanen, A., Jaakkola, S., Mäkelä, P., Simojoki, A. & Stoddard, F. L., 2015, In : *Nutrient Cycling in Agroecosystems*. 101, 2, p. 211-222 12 p.

**Nutritive quality and protein production from grain legumes in a boreal climate**

Lizarazo Torres, C., Lampi, A-M., Liu, J., Sontag-Strohm, T., Piironen, V. & Stoddard, F., 2015, In : *Journal of the Science of Food and Agriculture*. 95, 10, p. 2053-2064 12 p.

**Retrieval of leaf chlorophyll content in field crops using narrow-band indices: effects of leaf area index and leaf mean tilt angle**

Zou, X., Hernández-Clemente, R., Tammeorg, P., Torres, C. L., Stoddard, F. L., Mäkelä, P., Pellikka, P. & Möttus, M., 2015, In : *International Journal of Remote Sensing*. 36, 24, p. 6031-6055 25 p.

**Winter turnip rape as soil N scavenging catch crop in a cool humid climate**

Tuulos, A., Yli-Halla, M., Stoddard, F. & Mäkelä, P., 2015, In : *Agronomy for Sustainable Development*. 35, p. 359-366 8 p.

**Biochar application to a fertile sandy clay loam in boreal conditions: effects on soil properties and yield formation of wheat, turnip rape and faba bean**

Tammeorg, P., Simojoki, A., Mäkelä, P., Stoddard, F., Alakukku, L. & Helenius, J., 2014, In : *Plant and Soil*. 374, 1-2, p. 89-107 18 p.

**Genetic analysis reveals a novel locus in *Vicia faba* decoupling pigmentation in the flower from that in the extra-floral nectaries**

Khazaei, H., O'Sullivan, D. M., Sillanpää, M. J. & Stoddard, F. L., 2014, In : *Molecular Breeding*. 34, 3, p. 1507-1513 7 p.

**Interference potential of buckwheat, fababean, oilseed hemp, vetch, white lupin and caraway to control couch grass weed**

Zou, L., Santanen, A., Tein, B., Stoddard, F. & Mäkelä, P., 2014, In : *Allelopathy Journal*. 33, 2, p. 227-235 9 p.

**Photographic measurement of leaf angles in field crops**

Zou, X., Möttus, M., Tammeorg, P., Lizarazo Torres, C., Takala, T., Pisek, J., Makela, P., Stoddard, F. L. & Pellikka, P., 2014, In : *Agricultural and Forest Meteorology*. 184, p. 137-146 10 p.

**Short-term effects of biochar on soil properties and wheat yield formation with meat bone meal and inorganic fertiliser on a boreal loamy sand**

Tammeorg, P., Simojoki, A., Mäkelä, P., Stoddard, F. L., Alakukku, L. & Helenius, J., 2014, In : *Agriculture, Ecosystems & Environment*. 191, p. 108-116 9 p.

**The EU's dependence on soya bean import for the animal feed industry and potential for EU produced alternatives**  
de Visser, C., Schreuder, R. & Stoddard, F., 2014, In : Oilseeds and fats, crops and lipids . 21, 4, 8 p., D407.

**The effects of a permanently elevated water table in an acid sulphate soil on reed canary grass for combustion**  
Epie, K. E., Virtanen, S., Santanen, A., Simojoki, A. & Stoddard, F. L., 2014, In : Plant and Soil. 375, 1-2, p. 149-158 10 p.

**Use of synteny to identify candidate genes underlying QTL controlling stomatal traits in faba bean (*Vicia faba* L.)**  
Khazaei, H., O'Sullivan, D. M., Sillanpaa, M. J. & Stoddard, F. L., 2014, In : Theoretical and Applied Genetics. 127, 11, p. 2371-2385 15 p.

**A baseline study of vicine–convicine levels in faba bean (*Vicia faba* L.) germplasm**  
Khamassi, K., Ben Jeddi, F., Hobbs, D., Irigoyen, J., Stoddard, F., O'Sullivan, D. M. & Jones, H., 2013, In : Plant Genetic Resources. 11, 03, p. 250-257 8 p.

**Biomass yield and quality of bioenergy crops grown with synthetic and organic fertilizers**  
Seleiman, M. F., Santanen, A., Stoddard, F., Jaakkola, S., Hartikainen, H., Ekholm, P. & Mäkelä, P., 2013, In : Biomass & Bioenergy. 59, p. 477-485 9 p.

**Content of zinc, iron and their absorption inhibitors in Nicaraguan common beans (*Phaseolus vulgaris* L.)**  
Meyer, M. R. M., Rojas, A., Santanen, A. & Stoddard, F. L., 2013, In : Food Chemistry. 136, 1, p. 87-93 7 p.

**Do faba bean (*Vicia faba* L.) accessions from environments with contrasting seasonal moisture availabilities differ in stomatal characteristics and related traits?**  
Khazaei, H., Street, K., Santanen, A., Bari, A. & Stoddard, F., 2013, In : Genetic Resources and Crop Evolution. 60, 8, p. 2343-2357 15 p.

**Improved sustainability of feedstock production with sludge and interacting mycorrhiza**  
Seleiman, M. F., Santanen, A., Kleemola, J., Stoddard, F. & Mäkelä, P., 2013, In : Chemosphere. 91, 9, p. 1236-1242 7 p.

**The FIGS (Focused Identification of Germplasm Strategy) approach identifies traits related to drought adaptation in *Vicia faba* genetic resources: Drought Adaptation and Genetic Resources**  
Khazaei, H., Street, K., Bari, A., Mackay, M. & Stoddard, F., 2013, In : PLoS One. 8, 5, 10 p., e63107.

**Words for traditional Eurasian grain legumes in Uralic languages**  
Mikic, A. & Stoddard, F., 2013, In : Dialectologia et Geolinguistica. 21, p. 123-131 9 p.

**Conversion of carbohydrates in herbaceous crops during anaerobic digestion**  
Pakarinen, A., Kymäläinen, M., Stoddard, F. & Viikari, L., 2012, In : Journal of Agricultural and Food Chemistry. 60, 32, p. 7934-7940 7 p.

**Effect of cultivar and water regime on yield and yield components in safflower (*Carthamus tinctorius* L.)**  
Omid, A. H., Khazaei, H., Monneveux, P. & Stoddard, F., 2012, In : Turkish Journal of Field Crops. 17, 1, p. 10-15 6 p.

**Faba bean adaptation to autumn sowing under European climates**  
Flores, F., Nadal, S., Solis, I., Winkler, J., Sass, O., Stoddard, F., Link, W., Raffiot, B., Muel, F. & Rubiales, D., 2012, In : Agronomy for Sustainable Development. 32, p. 727-734 8 p.

**Feedstock quality and growth of bioenergy crops fertilized with sewage sludge**  
Seleiman, M. F., Santanen, A., Stoddard, F. & Mäkelä, P., 2012, In : Chemosphere. 89, 10, p. 1211–1217 7 p.

**Achievements in breeding autumn-sown annual legumes for temperate regions with emphasis on the continental Balkans**  
Mikic, A., Mihailovic, V., Cupina, B., Dordevic, V., Milic, D., Duc, G., Stoddard, F., Lejeune-Hénaut, I., Marget, P. & Hanocq, E., 2011, In : Euphytica. 180, p. 57-67 11 p.

**Determination of direct and indirect effects of carbon isotope discrimination ( $\Delta$ ), stomatal characteristics and water use efficiency on grain yield in wheat using sequential path analysis**

Khazaei, H., Mohammady, S., Monneveux, P. & Stoddard, F., 2011, In : Australian Journal of Crop Sciences. 5, 4, p. 466-472 7 p.

**Evaluation of annual bioenergy crops in the Boreal zone for biogas and ethanol production**

Pakarinen, A., Majjala, P., Stoddard, F., Santanen, A., Kymäläinen, M. & Viikari, L., 2011, In : Biomass & Bioenergy. 35, p. 3071-3078 8 p.

**Evaluation of preservation methods for improving biogas production and enzymatic conversion yields of annual crops**

Pakarinen, A., Majjala, P., Jaakkola, S., Stoddard, F., Kymäläinen, M. & Viikari, L., 2011, In : Biotechnology for Biofuels. 4, 20, 13 p.

**Revitalizing the winter turnip rape crop in the northern latitudes**

Mäkelä, P., Tuulos, A., Turakainen, M., Santanen, A. & Stoddard, F., 2011, In : Acta Agriculturae Scandinavica. Section B. Soil and Plant Science. 61, 3, p. 195-201 6 p.

**The legume manifesto: (Net)workers on Fabaceae, unite!**

Mikic, A., Rubiales, D., Smýkal, P. & Stoddard, F., 2011, In : Ratarstvo i Povrtarstvo. 48, p. 253-258 6 p.

**Faba bean breeding for drought-affected environments: A physiological and agronomic perspective**

Khan, H. R., Paull, J. G., Siddique, K. H. M. & Stoddard, F. L., 2010, In : Field Crops Research. 115, p. 279-286 8 p.

**Integrated pest management in faba bean**

Stoddard, F. L., Nicholas, A. H., Rubiales, D., Thomas, J. & Villegas-Fernandez, A. M., 2010, In : Field Crops Research. 115, p. 308-318 11 p.

**Introduction of novel legume crops in Serbia - White lupin (*Lupinus albus*)**

Mikic, A., Mihailovic, V., Cupina, B., Dordevic, V. & Stoddard, F. L., 2010, In : Ratarstvo i Povrtarstvo. 47, p. 21-26 6 p.

**Neglected legume crops of Serbia - Faba bean (*Vicia faba*)**

Mihailovic, V., Mikic, A., Vasic, M., Cupina, B., Duric, B., Duc, G., Stoddard, F. L. & Hauptvogel, P., 2010, In : Ratarstvo i Povrtarstvo. 47, p. 27-32 6 p.

**Physiology of flowering and grain filling in faba bean**

Patrick, J. W. & Stoddard, F. L., 2010, In : Field Crops Research. 115, p. 234-242 9 p.

**Winter hardiness in faba bean: Physiology and breeding**

Link, W., Balko, C. & Stoddard, F. L., 2010, In : Field Crops Research. 115, 3, p. 287-296 10 p.

**Legumes in Finnish agriculture: history, present status and future prospects**

Stoddard, F. L., Hovinen, S., Kontturi, M., Lindström, K. & Nykänen, A., 2009, In : Agricultural and Food Science. 18, 3/4, p. 191-205 15 p.

**Starch characterisation and variability in GBSS loci of synthetic hexaploid wheats and their durum and *Aegilops tauschii* parents**

Konik-Rose, C. M., Rahman, S., Appels, R., Moss, R., McMaster, G., Marshall, D. R. & Stoddard, F., 2009, In : Euphytica. 167, 2, p. 203-216 14 p.

**Interaction of heat-moisture conditions and physical properties in oat processing: II. Flake quality**

Gates, F., Sontag-Strohm, T., Stoddard, F., Dobraszczyk, B. J. & Salovaara, H., 2008, In : Journal of Cereal Science. 48, 2, p. 288-293 6 p.

**Interaction of heat-moisture conditions and physical properties in oat processing: I. Mechanical properties of steamed oat groats**

Gates, F. K., Dobraszczyk, B. J., Stoddard, F. L., Sontag-Strohm, T. & Salovaara, H., 2008, In : Journal of Cereal Science. 47, 2, p. 239-244 6 p.

**Comparison of methods for colorimetric amylose determination in cereal grains**

Mahmood, T., Turner, M. A. & Stoddard, F. L., 2007, In : Starch - Stärke. 59, 8, p. 357-365 9 p.

**Evaluation of physiological traits for improving drought tolerance in faba bean (*Vicia faba* L.)**

Khan, H. U. R., Link, W. & Stoddard, F., 2007, In : Plant and Soil. 292, 1-2, p. 205-217 13 p.

**Developmental regulation of mannan, arabinogalactan-protein, and pectic epitopes in pistils of *Vicia faba* (faba bean)**

Chen, W., Stoddard, F. & Baldwin, T. C., 2006, In : International Journal of Plant Sciences. 167, 5, p. 919-932 14 p.

**Screening techniques and sources of resistance to abiotic stresses in cool-season food legumes**

Stoddard, F., Balko, C., Erskine, W., Khan, H. R., Link, W. & Sarker, A., 2006, In : Euphytica. 147, 1-2, p. 167-186 20 p.

**Genetic analysis of quantitative traits in rice (*Oryza sativa* L.) exposed to salinity**

Mahmood, T., Turner, M., Stoddard, F. L. & Javed, M. A., 2004, In : Australian journal of agricultural research. 55, p. 1173-1181 9 p.

**Genetics of starch granule size distribution in tetraploid and hexaploid wheats**

Stoddard, F. L., 2003, In : Australian journal of agricultural research. 54, p. 637-648 12 p.

**Lupin flours as additives: Dough mixing, breadmaking, emulsifying, and foaming**

Pollard, N. J., Stoddard, F. L., Popineau, Y., Wrigley, C. W. & MacRitchie, F., 2002, In : Cereal Chemistry. 79, p. 662-669 8 p.

**Synergistic and additive effects of three high molecular weight glutenin subunit loci. I. Effects on wheat dough rheology**

Uthayakumaran, S., Beasley, H. L., Stoddard, F. L., Keentok, M., Phan-Thien, N., Tanner, R. I. & Bekes, F., 2002, In : Cereal Chemistry. 79, p. 294-300 7 p.

**Synergistic and additive effects of three high molecular weight glutenin subunit loci. II. Effects on wheat dough functionality and end-use quality**

Beasley, H. L., Uthayakumaran, S., Stoddard, F. L., Partridge, S. J., Daqiq, L., Chong, P. & Bekes, F., 2002, In : Cereal Chemistry. 79, p. 301-307 7 p.

**Effects of gliadin fractions on functional properties of wheat dough depending on molecular size and hydrophobicity**

Uthayakumaran, S., Tomoskozi, S., Tatham, A. S., Savage, A. W. J., Gianibelli, M. C., Stoddard, F. L. & Bekes, F., 2001, In : Cereal Chemistry. 78, p. 138-141 4 p.

**Evaluating faba beans for rust resistance using detached leaves**

Herath, I. H. M. H. B., Stoddard, F. L. & Marshall, D. R., 2001, In : Euphytica. 117, p. 47-57 11 p.

**Evaluation of the 40 mg swelling test for measuring starch functionality**

Konik-Rose, C. M., Moss, R., Rahman, S., Appels, R., Stoddard, F. & McMaster, G., 2001, In : Starch - Stärke. 53, p. 14-20 7 p.

**Genetic analysis of partial rust resistance in faba beans**

Stoddard, F. L. & Herath, I. H. M. H. B., 2001, In : Australian journal of agricultural research. 52, p. 73-84 12 p.



**Response of canola to different heat stresses**

Aksouh, N. M., Jacobs, B. C., Stoddard, F. L. & Mailer, R. J., 2001, In : Australian journal of agricultural research. 52, p. 817-824 8 p.

**Screening of chickpeas for adaptation to autumn sowing**

O'Toole, N., Stoddard, F. L. & O'Brien, L., 2001, In : Journal of Agronomy and Crop Science. 186, p. 193-207 15 p.

**Basic rheology of bread dough with modified protein content and glutenin-to-gliadin ratios**

Uthayakumaran, S., Newberry, M., Keentok, M., Stoddard, F. L. & Bekes, F., 2000, In : Cereal Chemistry. 77, p. 744-749 6 p.

**Characterization of starch in Aegilops species**

Stoddard, F. L. & Sarker, R., 2000, In : Cereal Chemistry. 77, p. 445-447 3 p.

**Effects of incorporated glutenins on functional properties of wheat dough**

Uthayakumaran, S., Stoddard, F. L., Gras, P. W. & Bekes, F., 2000, In : Cereal Chemistry. 77, p. 737-743 7 p.

**Effects of nitrogen and sulfur fertilization on commercial-scale wheat quality and mixing requirements**

Wooding, A. R., Kavale, S., Wilson, A. J. & Stoddard, F. L., 2000, In : Cereal Chemistry. 77, p. 791-797 7 p.

**Effects of nitrogen and sulfur fertilizer on protein composition, mixing requirements, and dough strength of four wheat cultivars**

Wooding, A. R., Kavale, S., MacRitchie, F., Stoddard, F. L. & Wallace, A., 2000, In : Cereal Chemistry. 77, p. 798-807 10 p.

**Evaluating faba beans for resistance to ascochyta blight using detached organs**

Kohpina, S., Knight, R. & Stoddard, F. L., 2000, In : Australian journal of experimental agriculture. 40, p. 707-713 7 p.

**Genetics of resistance to ascochyta blight in two populations of faba bean**

Kohpina, S., Knight, R. & Stoddard, F. L., 2000, In : Euphytica. 112, p. 101-107 7 p.

**Genetics of wheat starch B-granule content**

Stoddard, F. L., 2000, In : Euphytica. 112, p. 23-31 9 p.

**Optimized methods for incorporating glutenin subunits into wheat dough for extension and baking studies**

Uthayakumaran, S., Stoddard, F. L., Gras, P. W. & Bekes, F., 2000, In : Cereal Chemistry. 77, p. 731-736 6 p.

**Amylose content in segregating populations of einkorn, emmer, and rye**

Mohammadkhani, A., Stoddard, F. L. & Marshall, D. R., 1999, In : Starch - Stärke. 51, p. 66-73 8 p.

**Effect of varying protein content and glutenin-to-gliadin ratio on the functional properties of wheat dough**

Uthayakumaran, S., Gras, P. W., Stoddard, F. L. & Bekes, F., 1999, In : Cereal Chemistry. 76, p. 389-394 6 p.

**Link between mixing requirements and dough strength**

Wooding, A. R., Kavale, S., MacRitchie, F. & Stoddard, F. L., 1999, In : Cereal Chemistry. 76, p. 800-806 7 p.

**Starch extraction and amylose analysis from half seeds**

Mohammadkhani, A., Stoddard, F. L., Marshall, D. R., Uddin, M. N. & Zhao, X. C., 1999, In : Starch - Stärke. 51, p. 62-66 5 p.

**Survey of starch particle-size distribution in wheat and related species**

Stoddard, F. L., 1999, In : Cereal Chemistry. 76, p. 145-149 5 p.

**Variability of *Ascochyta fabae* in South Australia**

Kohpina, S., Knight, R. & Stoddard, F. L., 1999, In : Australian journal of agricultural research. 50, p. 1475-1481 7 p.

**Variation in faba bean amylose content**

Gunasekera, S. U. A. K., Stoddard, F. L. & Marshall, D. R., 1999, In : Starch - Stärke. 51, p. 259-262 4 p.

**Variation in grain mass, grain nitrogen, and starch B-granule content within wheat heads**

Stoddard, F. L., 1999, In : Cereal Chemistry. 76, p. 139-144 6 p.

**Survey of amylose content in *Secale cereale*, *Triticum monococcum*, *T-turgidum* and *T-tauschii***

Mohammadkhani, A., Stoddard, F. L. & Marshall, D. R., 1998, In : Journal of Cereal Science. 28, p. 273-280 8 p.

**A rapid antibody-based test for *Sec-2*, a marker for the short arm of chromosome 2 of rye (2RS)**

Skerritt, J. H., Andrews, J. L., Stoddard, F. L., Gupta, R. B. & Howes, N. K., 1996, In : Genome. 39, p. 1006-1012 7 p.

**The effect of moisture stress on bread wheat, rye, barley, and *Dasypyrum villosum***

Shah, S. H., Stoddard, F. L. & Waines, J. G., 1996, In : Journal of genetics & breeding. 50, p. 343-350 8 p.

**Derivation of superior F5 lines from heterotic hybrids in pea**

SARAWAT, P., STODDARD, F. L. & MARSHALL, D. R., 1994, In : Euphytica. 73, 3, p. 265-272 8 p.

**Genetic distance and its association with heterosis in peas**

Sarawat, P., Stoddard, F. L. & Marshall, D. R., 1994, In : Euphytica. 73, p. 255-264 10 p.

**Heterosis for yield and related characters in peas**

SARAWAT, P., STODDARD, F. L., MARSHALL, D. R. & ALI, S. M., 1994, In : Euphytica. 80, p. 39-48 10 p.

**Limits to retention of fertilised flowers in faba beans (*Vicia faba* L.)**

STODDARD, F. L., 1993, In : Journal of Agronomy and Crop Science. 171, p. 251-259 9 p.

**Termination of flowering in 'indeterminate' field beans (*Vicia faba*)**

STODDARD, F. L., 1993, In : Journal of Agricultural Science. 120, p. 79-87 9 p.

**Variability in grain protein in peas and lentils in Australia**

STODDARD, F. L., MARSHALL, D. R. & ALI, S. M., 1993, In : Australian journal of agricultural research. 44, p. 1415-1419 5 p.

**Pollen vectors and pollination of faba beans in southern Australia**

STODDARD, F. L., 1991, In : Australian journal of agricultural research. 42, p. 1173-1178 6 p.

**Variability in grain protein in Australian hexaploid wheats**

STODDARD, F. L. & MARSHALL, D. R., 1990, In : Australian journal of agricultural research. 41, p. 277-288 12 p.

**The pollination requirements of the faba bean (*Vicia faba* L.)**

STODDARD, F. L. & BOND, D. A., 1987, In : Bee world. 68, p. 144-152 9 p.

**Autofertility and bee visitation in winter and spring genotypes of faba beans (*Vicia faba* L.)**

STODDARD, F. L., 1986, In : Plant Breeding. 97, p. 171-182 12 p.

**Effects of irrigation, plant density and genotype on pollination, fertilization and seed development in spring field beans (*Vicia faba* L.)**

STODDARD, F. L., 1986, In : Journal of Agricultural Science. 107, p. 347-355 9 p.

**Floral viability and pollen tube growth in *Vicia faba* L**

STODDARD, F. L., 1986, In : Journal of Plant Physiology. 123, p. 249-262 14 p.

**Pollination and fertilization in commercial crops of field beans (*Vicia faba* L.)**

STODDARD, F. L., 1986, In : Journal of Agricultural Science. 106, p. 89-97 9 p.

**Pollination, fertilization and seed development in inbred lines and F1 hybrids of spring faba beans (*Vicia faba* L.)**

STODDARD, F. L., 1986, In : Plant Breeding. 97, p. 210-221 12 p.

**Pollination, fertilization and seed development in winter stocks of faba beans (*Vicia faba* L.)**

STODDARD, F. L., 1986, In : Euphytica. 35, p. 925-934 10 p.

**The distribution of immature thrips among flowers of faba beans in commercial crops and experimental plots**

STODDARD, F. L., 1986, In : Annals of Applied Biology. 109, p. 61-69 9 p.

**Evaluation of colour transparency films for photomicrography of fluorescent structures**

STODDARD, F. L. & MCCULLY, M. E., 1981, In : Histochemistry. 73, p. 121-129 9 p.

**Effects of excision of stock and scion organs on the formation of the graft union in *Coleus*: a histological study**

STODDARD, F. L. & MCCULLY, M. E., 1980, In : International Journal of Plant Sciences. 141, p. 401-412 12 p.

**Histology of the development of the graft union in pea roots**

Stoddard, F., 1979, In : Canadian journal of botany. 57, p. 1486-1501 16 p.

## **Key professional activities**

**Succeed with grain legumes**

Fred Stoddard (Speaker)

23 Jan 2019

**Examination of PhD thesis of the University of Sydney, Australia**

Fred Stoddard (Pre-examiner)

5 Feb 2018

**Uusia valkuaiskasveja viljelyyn**

Fred Stoddard (Speaker)

1 Nov 2017

**Kiflemariam Yehuala Belachew**

Fred Stoddard (Supervisor)

1 Dec 2014 → 30 Jun 2019

**External thesis supervision: Moritz Reckling**

Fred Stoddard (Supervisor)

1 Sep 2014 → 14 Dec 2018

**KoneAgria**

Fred Stoddard (Speaker: Presenter)

25 Oct 2012

**ProAgria palkokasvipäivät 22-23.02.2012**

Fred Stoddard (Speaker: Presenter)  
22 Feb 2012 → 23 Feb 2012

**Pro-Agria Itä-Uusimaa**

Fred Stoddard (Speaker: Presenter)  
19 Jul 2011

**ProAgria Länsi-Uusimaa**

Fred Stoddard (Speaker: Presenter)  
13 Jul 2011

**Österbottens Kött**

Fred Stoddard (Speaker: Presenter)  
17 Mar 2011

**Luomuvalkuaisseminaari**

Fred Stoddard (Speaker: Presenter)  
26 Nov 2010

**ProAgrian Viljelysuunnittelun ajankohtaispäivä**

Fred Stoddard (Speaker: Presenter)  
2 Nov 2010

**KoneAgria**

Fred Stoddard (Speaker: Presenter)  
20 Oct 2010

**Department's Stakeholders Day**

Fred Stoddard (Speaker: Presenter)  
19 Aug 2010

**Päivitä tietosi luomusta! – Luomuseminaari**

Fred Stoddard (Speaker: Presenter)  
28 Jul 2010

**Öljykasvienpäivät**

Fred Stoddard (Speaker: Presenter)  
11 Mar 2010

**Thesis supervision: Clara Lizarazo**

Fred Stoddard (Supervisor)  
1 Jan 2010 → 30 Apr 2017

**Thesis supervision: Epié Kenedy**

Fred Stoddard (Supervisor)  
1 Jan 2010 → 13 Nov 2015

**Thesis supervision: Ling Zou**

Fred Stoddard (Co-supervisor)  
1 Jan 2010 → 31 Dec 2015

**Satafood seminaari, Loimaa**  
Fred Stoddard (Speaker: Presenter)  
12 Nov 2009

**ProAgria seminaari**  
Fred Stoddard (Speaker: Presenter)  
10 Nov 2009

**Thesis supervision: Mahmoud Seleiman**  
Fred Stoddard (Co-supervisor)  
1 Oct 2009 → 4 Apr 2014

**Thesis supervision: Hamid Khazaei**  
Fred Stoddard (Supervisor)  
1 Sep 2009 → 30 Sep 2014

**Thesis supervision: Antti Tuulos**  
Fred Stoddard (Co-supervisor)  
1 Jan 2009 → 31 Dec 2015

**Thesis supervision: Petra Manninen-Egilmez**  
Fred Stoddard (Co-supervisor)  
1 Jan 2009 → 31 Dec 2015

**Heureka Centre: Biology day**  
Fred Stoddard (Speaker: Presenter)  
12 Dec 2008

**Café Scientifique: Academy of Finland public presentation**  
Fred Stoddard (Speaker: Presenter)  
27 Oct 2008

**External thesis supervision: Wen Chen**  
Fred Stoddard (Supervisor)  
1 Jan 2003 → 31 Dec 2006

## **Press/Media**

**Interview for Landsbygdens Folk**  
Fred Stoddard  
07/08/2017  
1 media contribution

**Interview for Yle about goose-dog**  
Fred Stoddard  
19/06/2017  
1 item of media coverage

**Interview for Luomulehti**  
Fred Stoddard  
12/09/2014  
1 media contribution

**Interview for Maatilan Pellervo**  
Fred Stoddard

08/08/2014  
1 media contribution

**Interview for French radio about teaching in English**

Fred Stoddard  
18/06/2013  
1 media contribution

**Harva tuntee proteiini- ja kuitupitoisen sinilupiinin hyödyt: Narrow-leaved lupin for protein- and fibre-rich foods**

Fred Stoddard  
04/04/2013  
1 media contribution

**Interview for Nelonen uutiset about home-grown feed protein**

Fred Stoddard  
01/03/2013  
1 media contribution

**Glorian Ruoka ja Viini-lehti 12.2010: Palkokasvien ekologisuus**

Fred Stoddard  
01/12/2010  
1 media contribution

**Tiede-lehti 08.2010: Tekniikka: Hamppu valmiina palvelukseen**

Fred Stoddard  
01/08/2010  
1 media contribution

**Luomu-lehti 04.2010: Legumes for organic and conventional agriculture**

Fred Stoddard  
01/04/2010  
1 media contribution

**Kehittyvä Elintarvike-lehti 2010: Potential for foods made from grain legumes**

Fred Stoddard  
01/03/2010  
1 media contribution

**Maatilan Pellervo-lehti 12.2009: Lupin a partner for faba bean?: Lupiinista kaveri härkäpavulle?**

Fred Stoddard  
01/12/2009  
1 media contribution

**Helsingin Sanomat newspaper 17.08.2009: Blue lupin demonstrated to lower blood pressure: Sinilupiinin todettu alentavan verenpainetta**

Fred Stoddard  
17/08/2009  
1 media contribution

**Maaseudun Tiede-lehti 07.2009: Area sown to feed legumes expected to increase: Rehupalkokasvien viljelyalan uskotaan moninkertastuvan**

Fred Stoddard  
08/07/2009  
1 media contribution

**Käytännön Maamies KM magazine 04.2009: Faba bean to be Europe's soybean: Härkäpavusta Euroopan soija**

Fred Stoddard

01/04/2009

1 media contribution

**Maaseudun Tiede-lehti 03.2009: Blue lupin, a new animal feed: Sinilupiinista uusi rehukasvi**

Fred Stoddard

09/03/2009

1 media contribution

## Projects

**MAGGE-pH: MAGGE pH: Mitigating Agricultural Greenhouse Gas Emissions by Improved pH management of soils**

Simojoki, A., Stoddard, F., Penttinen, P., Lindström, K. & Tuovinen, A.

01/09/2017 → 31/08/2020

Project: Research project

**Papugeno: Genomic tools for faba bean (*Vicia faba* L.) improvement for food and protein security**

Stoddard, F. & Schulman, A.

SUOMEN AKATEMIA

01/09/2016 → 31/08/2020

Project: Research project

**NORFAB: Protein for the Northern Hemisphere**

Schulman, A. & Stoddard, F.

Innovation Fund Denmark

01/03/2016 → 28/02/2021

Project: Research project

**ViPS: Viikki Plant Science Centre**

Elomaa, P., Aphalo, P., Asiegbu, F., Bäck, J., Berninger, F., Brosche, M., Fagerstedt, K., Hänninen, H., Heinonsalo, J., Helariutta, Y., Himanen, K., Hölttä, T., Hytönen, T., Hyvönen, J., Kangasjärvi, J., Kärkönen, A., Korpelainen, H., Laine, A., Mähönen, A. P., Mäkelä, A., Mäkinen, K., Ojala, A., Overmyer, K., Palonen, P., Palva, E. T., Pihlatie, M., Pirhonen, M., Porcar-Castell, A., Pumpanen, J., Rikkinen, J., Robson, T. M., Salojärvi, J., Schulman, A., Stoddard, F., Teeri, T., Valkonen, J., Vesala, T., Wrzaczek, M. & Sims-Huopaniemi, K.

01/01/2015 → ...

Project: Other project

**NaPPI: NaPPI-Kansallinen Kasvi Fenotyypaus Infrastrukturi NaPPI - National Plant Phenotyping Infrastructure**

Palva, E. T., Asiegbu, F., Elomaa, P., Fagerstedt, K., Helariutta, Y., Himanen, K., Hytönen, T., Kangasjärvi, J., Mäkelä, P., Schulman, A., Sims-Huopaniemi, K., Stoddard, F., Teeri, T., Valkonen, J., Oksanen, E., Keinänen, M., Dumont, J., Hauta-Kasari, M., Hiltunen, J., Karjalainen, P., Aro, E. & Häggman, H.

Unknown funder

01/12/2013 → ...

Project: Research project

**Jatkokoulutus (NIFAPRO) Human capital development in agricultural biotechnology**

Valkonen, J., Korpelainen, H., Elomaa, P. & Stoddard, F.

01/12/2013 → 31/12/2015

Project: Research project

**Long-term effects of biochar as a soil amendment material in boreal agriculture**

Tammeorg, P., Zrim, J., Mäkelä, P., Simojoki, A., Stoddard, F., Helenius, J. & Kalu, S.

01/01/2013 → 31/01/2024

Project: Research project

**Kasvinviljely- ja kotieläintilojen yhteistyö - avain tuotannon kestävään tehostamiseen**

Mikkola, H., Pyykkönen, P., Seppänen, M., Jaakkola, S., Stoddard, F., Mäkelä, P., Vanhatalo, A., Valaja, J., Helenius, J., Alakukku, L., Yli-Halla, M., Lindström, K., Penttinen, P., Sipiläinen, T., Lätti, M., Karttunen, J. & Rinta-Kiikka, S.

01/01/2013 → 31/12/2015

Project: Research project

### **Fabapapuaines - Härkäpapupohjaisten elintarvikkeiden ja elintarvikeingredienttien valmistus**

Salovaara, H., Piironen, V., Lampi, A., Stoddard, F., Sontag-Strohm, T., Kanerva, P., Kariluoto, S., Pulkkinen, M., Jiang, Z., Tahvonen, R., Järvenpää, E., Rokka, S., Pihlava, J., Mäki, M., Latvala, T., Kotro, J. & Niva, M.

Unknown funder

01/01/2012 → 31/12/2014

Project: Research project

### **Sensory ecology of plants and pre-emptive acclimation**

Aphalo, P., Stoddard, F., Yan, Y., Rai, N., Lindfors, A., Novoplansky, A., Sadras, V. O., Morales Suarez, L. O., Lehto, T., Neugart, S., Wang, F. & Siipola, S. M.

01/01/2012 → ...

Project: Research project

### **Science of Sustainable Agriculture (SSA)**

Ahokas, J., Alakukku, L., Alitalo, A., Bouquet, A., Chen, L., Egilmez, P., Elo, K., Hakojärvi, M., Hartikainen, H., Hautala, M., Helenius, J., Hepola, H., Herzon, I., Hokkanen, H., Honkanen, A., Hytönen, T., Häggman, J., Jaakkola, S., Jauni, M., Jokela, V., Juga, J., Kallioniemi, M. K., Kenedy Etone, E., Keskinen, R., Khazaei, H., Kivelä, J., Knuutila, O., Kokkonen, T., Kostamo, K., Kuisma, R., Kymäläinen, H., Kärkkäinen, H., Laaksoharju, T., Laurila, H. A., Lehtimäki, M., Lehto, M. K., Levonmäki, M. M., Liinamo, A., Linden, L., Lizarazo Torres, C., Ma, M., Makgahlela, M., Mattila, P., Menzler-Hokkanen, I., Mikkola, H., Muma, E. N., Mäkelä, P., Määttä, J., Niemelä, T., Nykänen, A., Näsi, M., Ojala, M., Ooperi, S., Pakarinen, A., Palonen, P., Pastell, M., Peltovuori, T., Puustinen, M. S., Rantanen, M., Rappe, E., Rasa, K., Riesinger, P., Risku-Norja, H., Ristolainen, A. K., Roslin, T., Rätty, M., Sairanen, J., Salin, S., Santanen, A., Seleiman, M. F., Seppänen, M., Siipola, V., Sillanpää, M., Simojoki, A., Soinne, H., Stoddard, F., Suontama, M., Säisä, M., Tallberg, P., Tammeorg, P., Tamminen, P., Tarmi, S., Teye, F. K., Tiusanen, J., Turakainen, M., Tuulos, A., Tyrisevä, A., Valkonen, J., Vanhatalo, A., Venäläinen, S., Virtanen, S., Yli-Halla, M., Ylivainio, K., Zec-Vojinovic, M. & Zou, L.

24/02/2011 → ...

Project: Research Evaluation 2011

### **Kotimaiset palkoviljat maidontuotannon omavaraisuuden tehostajana**

Vanhatalo, A., Puhakka, L., Jaakkola, S., Kokkonen, T. & Stoddard, F.

Unknown funder

01/01/2011 → 31/12/2014

Project: Research project

### **Grain legume quality for food purposes**

Stoddard, F., Piironen, V., Kariluoto, S., Lampi, A., Sontag-Strohm, T., Lopenen, J., Salovaara, H. & Lizarazo Torres, C.

01/09/2010 → ...

Project: Research project

### **Legume Futures; Legume-supported cropping systems for Europe**

Stoddard, F., Nykänen, A., Lindström, K. & Simojoki, A.

01/02/2010 → 31/01/2014

Project: Research project

### **AgriHiili (2010-2012): Towards carbon-negative farming: use of biochar as carbon sink, as soil conditioner and in preventing nutrient leaching**

Helenius, J., Tammeorg, P., Mäkelä, P., Stoddard, F., Simojoki, A., Yli-Halla, M. & Alakukku, L.

01/01/2010 → 31/12/2012

Project: Research project

### **Kasvintuotannon ekologinen intensifikaatio**

Mäkelä, P., Stoddard, F., Zou, L., Santanen, A., Yli-Halla, M. & Lindström, K.

Unknown funder

01/01/2010 → 31/12/2012

Project: Research project



**Legume-supported crop rotations for Finland**

Stoddard, F., Lizarazo Torres, C., Lindström, K. & Santanen, A.

01/01/2010 → 31/12/2013

Project: Research project

**Sustainable bioenergy cropping systems**

Stoddard, F., Kenedy Etone, E., Santanen, A., Yli-Halla, M. & Simojoki, A.

01/01/2010 → 31/12/2013

Project: Research project

**Grain legume quality for feed purposes**

Stoddard, F., Vanhatalo, A., Jaakkola, S., Näsi, M. & Lizarazo Torres, C.

01/09/2009 → ...

Project: Research project

**Leaf traits associated with drought resistance in faba bean (*Vicia faba* L.)**

Stoddard, F., Santanen, A., Khazaei, H. & Sillanpää, M.

01/09/2009 → 31/08/2013

Project: Research project

**Syysrypsin monipuolisuus tehokkaaseen käyttöön**

Mäkelä, P., Tuulos, A., Stoddard, F., Santanen, A., Yli-Halla, M., Lindström, K., Kleemola, J., Jaakkola, S. & Turakainen, M.

01/01/2009 → 31/12/2011

Project: Research project

**Bioenergy, electricity and emission trading markets (BEET)**

Stoddard, F., Santanen, A., Ollikainen, M. & Lankoski, J.

01/01/2008 → 31/12/2011

Project: Research project

**Human Capital Development in Agricultural Biotechnology Programme (NIFAPRO)**

Elomaa, P., Korpelainen, H., Stoddard, F., Niklander-Teeri, V. & Valkonen, J.

15/08/2007 → 31/12/2012

Project: Research project