

PRODUCTIONS du LEVA 2018 - 2023

ARTICLES DANS DES REVUES INTERNATIONALES AVEC COMITE DE LECTURE

2022

Gardarin A., Celette F., **Naudin C.**, **Piva G.**, Valantin-Morison M., Vrignon-Brenas S., Verret V., Médiène S. 2022. Intercropping with service crops provides multiple services in temperate arable systems: a review. *Agronomy for Sustainable Development* 42, 39. <https://doi.org/10.1007/s13593-022-00771-x>.

Boeglin L., Morère Le-Paven M.-C., Clochard T., **Fustec J.**, Limami A.M. 2022. *Pisum sativum* Response to Nitrate as Affected by *Rhizobium leguminosarum*-Derived Signals. *Plants* 11, 1966. <https://doi.org/10.3390/plants11151966>.

Karimi B., Sadet-Bourgeteau S., **Cannavacciuolo M.**, Chauvin C., Flamin C., Haumont A., Jean-Baptiste V., Reibel A., Vrignaud G., Ranjard L. 2022. Impact of biogas digestates on soil microbiota in agriculture: a review. *Environmental Chemistry Letters*. <https://doi.org/10.1007/s10311-022-01451-8>.

Dayoub E., **Piva G.**, **Shirliffe S.J.**, **Fustec J.**, **Corre-Hellou G.**, **Naudin C.** 2022. Species choice influences weed suppression, N sharing and crop productivity in oilseed rape-legume intercrops. *Agronomy* 12(9), 2187. <https://doi.org/10.3390/agronomy12092187>.

Revoyron E., Le Bail M., Meynard J.-M., Gunnarsson A., Seghetti M., Colombo L. 2022. Diversity and drivers of crop diversification pathways of European farms. *Agricultural Systems* 201. <https://doi.org/10.1016/j.agsy.2022.103439>.

2021

Lefort C., **Raveneau MP.**, **Cannavacciuolo M.**, Guerry B., **Fustec J.** 2021. Predictors for assessing the flowering duration and dynamics of the complex umbellate of fennel in seed production. *Annals of Applied Biology*, doi: 10.1111/aab.12685.

Viguié L., Bockstaller C., Cavan N., Dubois S., Keichinger O., Toqué C., Toupet de Cordoue A.L., **Corre-Hellou G.**, Angevin F. 2021. Combining diversification practices to enhance the sustainability of conventional cropping systems. *European Journal of Agronomy*, DOI: 10.1016/j.eja.2021.126279.

Gaudio N., Violle C., Gendre X., Fort F., Mahmoud R., Pelzer E., Médiène S., Hauggaard-Nielsen H., Bedoussac L., Bonnet C., Corre-Hellou G., Couëdel A., Hinsinger P., Jensen E.S., Journet E.P., Justes E., Kammoun B., Litrico I., Moutier N., **Naudin C.**, Casadebaig P. 2021. Interspecific interactions regulate plant reproductive allometry in cereal-legume intercropping systems. *Journal of Applied Ecology*. doi/abs/10.1111/1365-2664.13979.

Bousselin X., **Cassagne N.**, Baux A., Valantin-Morison M., Herrera J.-M., **Lorin M.**, **Hédan M.**, **Fustec J.** 2021. Interactions between plants and plant-soil in functionally complex mixtures including grass pea, faba bean and niger, intercropped with oilseed rape. *Agronomy*. 11(8), 1493. doi.org/10.3390/agronomy11081493.

Jouan J., Carof M., **Baccar R.**, Bareille N., Bastian S., Brogna D., Burgio G., Couvreur S., Cupial M., Dufrêne M., Dumont B., Gontier P., Jacquot A.-L., Kanski J., Magagnol S., Makulska J., Peres G., Ridier A., Salou T., Sgolastra F., Szelag-Sikora A., Tabor S., Tombarkiewicz B., Weglarz A., Godinot O. 2021. SEGAE: An online serious game to learn agroecology. *Agricultural Systems*. doi.org/10.1016/j.agsy.2021.103145.

2020

Malagoli P., Naudin C., Vrignon-Brenas S., **Sester M.**, Jeuffroy M.-H., **Corre-Hellou G.** 2020. Modelling nitrogen and light sharing in pea-wheat intercrops to design decision rules for N fertilisation according to farmers' expectations. *Field Crops Research*, 255, 107865. doi.org/10.1016/j.fcr.2020.107865.

Cheriere T., Lorin M., Corre-Hellou G. 2020. Species choice and spatial arrangement in soybean-based intercropping: Levers that drive yield and weed control. *Field Crops Research*, 256, 107923. doi.org/10.1016/j.fcr.2020.107923.

Carton N., Naudin C., Piva G., Corre-Hellou G. 2020. Intercropping Winter Lupin and Triticale Increases Weed Suppression and Total Yield. *Agriculture*, doi.org/10.3390/agriculture10080316.

Jouan J., De Graeuwe M., Carof M., **Baccar R.**, Bareille N., Bastian S., Brogna D., Burgio G., Couvreur S., Cupial M., Dumont B., Jacquot A.-L., Magagnoli S., Makulska J., Maréchal K., Pérès G., Ridier A., Thibault Salou T., Tombarkiewicz B., Sgolastra F., Godinot O. 2020. Learning Interdisciplinarity and Systems Approaches in Agroecology: Experience with the Serious Game SEGAE. *Sustainability*, 12, 4351. https://doi.org/10.3390/su12114351

2019

Bobille B., Fustec J., Robins J. R., Cukier C., Limami A. M. 2019. Effect of water deficit on root exudation of amino acids by *Pisum sativum*. *Phytochemistry* 161, 75–85. https://doi.org/10.1016/j.phytochem.2019.01.015.

Mawois M., Revoyron E., Vidal A., Casagrande M., Jeuffroy MH., Le Bail M. 2019. Transition to legume-based farming systems requires stable outlets, learning and peer-networking. *Agronomy for Sustainable Development* 39, 1-14. doi:10.1007/s13593-019-0559-1.

2018

Drut B., Cassagne N., Cannavacciuolo M., Le Floch G., Cobo-Diaz J. F., **Fustec J.** 2017. Synergistic effects between wheat-clover intercrops and earthworms improve wheat performance. *Journal of Agricultural Science* 10 (12):1-14. doi:10.5539/jas.v10n12p1.

Vrignon-Brenas S., Célette F., Piquet-Pissaloux A., **Corre-Hellou G.**, David C. 2018. Intercropping strategies of white clover with organic wheat to improve the trade-off between wheat yield, protein content and the provision of ecological services by white clover. *Field Crops Research* 224, 160-169. doi: org/10.1016/j.fcr.2018.05.009.

Carton N., Naudin C., Piva G., Corre-Hellou G. 2018. Variability of traits associated with early N acquisition in lupin and early complementarity in lupin-triticale mixed stands. *AoB Plants* doi: 10.1093/aobpla/ply001.

ARTICLES DANS DES REVUES SANS COMITE DE LECTURE

Bousselin X., Cassagne N., Baux A., Valantin-Morison M., Lorin M., Hédan M., Fustec J. 2021. Plant-soil and plant-plant interactions in winter oilseed rape intercropped with service plants: Are there functional differences between species?. Intercropping for sustainability: Research developments and their application, Aspects of Applied Biology, 146, 4 pages.

Bousselin X., Baux A., Fustec J., Lorin M., Cassagne N., Valantin-Morison M. 2021. Complex intercropping of winter oilseed rape with frost sensitive service plants: How to explain ecosystem services variability?, Intercropping for sustainability: Research developments and their application, Aspects of Applied Biology, 146, 6 pages.

Boeglin L., Limami A.M., Fustec J. 2021. Rhizobium effect on lateral root development of pea under various nitrate concentrations in the early growth: a phenotype study. Intercropping for sustainability: Research developments and their applications, Aspects of Applied Biology, 146, 6 pages.

Enjalbert J., Litrico I., Fournier E., Médiène S., Gauffreteau A., Borg J., **Corre-Hellou G.**, Goldringer I., Hanachi M., Journet E.-P., Justes E., Morel J.-B., **Naudin C.**, Sanguin H., Valantin-Morison M., Verret V., Bedoussac L.. 2019. Mélanges variétaux et mélanges plurispécifiques – atouts et contraintes. Innovations Agronomiques, 75: 49-71. <https://www6.inra.fr/ciag/Revue/Volumes-publies-en-2019/Volume-75-Mai-2019>

Valantin-Morison M., Verret V., Médiène S., **Lorin M.**, Pelzer E., Celette F., **Naudin C.** 2019. ALLIANCE : Amélioration des performances écologiques et économiques par association de plantes de services Légumineuses dans des systèmes de grandes cultures. Innovations Agronomiques 55, 349-365.

Fontaine L., Celette F., Cordeau S., Métais P., Vacher C., Cohan J.-P., Fourrié L., Jouany C., Leclerc B., Véricel G., Vian J.-F., **Aveline A.**, de Cordoue A.-L., Boissinot F., Burel E., Castel L., Champion J., Desclaux D., Dupont A., Le Bras M., Prieur L., Quirin T., Thévenon P., Casagrande M. 2019. InnovAB - Améliorer les systèmes de grande culture en agriculture biologique : enseignements d'un réseau d'expérimentations de longue durée. Innovations Agronomiques 71, 295-309.

Drut B., Cassagne N., Cannavacciuolo M., Brauman A., Le Floch G., Cobo-Diaz J.F., Fustec J. 2018. Mobilization of interactions between functional diversity of plant and soil organisms on nitrogen availability and use. Aspects of Applied Biology 138, 31-42.

Baccar R., Hellou G., Fustec J. 2018. Dynamic of lupin-cereal intercrop and interaction with soil nitrogen during early stages of development. Aspects of Applied Biology 138, 69-79.

Bobille H., Fustec J., Robins J. R., Cukier C., Limami A.M. 2018. Amino acid fingerprint in the rhizosphere of *Pisum sativum* in response to water stress. Aspects of Applied Biology 138, 81-84.

Revoyron E., Vidal A., Casagrande M., Jeuffroy M.-H., Lebaill M., Mawois M. 2018. Trajectories of Legumes insertion in farms: methodological framework for the analysis of long-term. Aspects of Applied Biology 138, 99-107.

CONFÉRENCES DONNÉES À L'INVITATION DU COMITÉ D'ORGANISATION DANS UN CONGRÈS NATIONAL OU INTERNATIONAL

Corre-Hellou G. 2021. Les légumineuses dans des systèmes de culture sans pesticides ? Rencontres Francophones Légumineuses - RFL3. ESA Angers (France), 24-25 February 2021 - <https://www.rfl-legumineuses.com/>.

Corre-Hellou G. 2021. Légumineuses comme plantes de service dans les systèmes de cultures intéragées, retours d'expériences et points de vigilance. RFL3. ESA Angers (France), 24-25 February 2021 - <https://www.rfl-legumineuses.com/>.

Lefort C., Raveneau M.-P., Fustec J. 2021. Effect of climatic factors on flowering durations and dynamics in fennel seed production. Plantum Seed Technology webinar. 12 May 2021.

COMMUNICATIONS AVEC ACTES DANS UN CONGRÈS INTERNATIONAL

Bousselin X., Fustec J., Valantin-Morison M., **Lorin M., Cassagne N., Hedan M.,** Laurent E.A., Fridén L., Baux A. 2021. Is diversity of service plant species a way to achieve higher biomass and N accumulation in rapeseed-service plant intercropping? Biofumigation 7 : International Symposium on Biocidal and Non-Biocidal Plants to improve Soil Health. 22-26 March 2021. Crans-Montana, Switzerland. On line event (communication orale).

Kerebel A., Cannavacciuolo M., Emiel R., Piva G., Fustec J. 2021. Réponse des traits racinaires du colza et de la féverole à la culture en association et à la fertilisation azotée et soufrée. Rencontres Francophones Légumineuses - RFL3. 24-25 February 2021, ESA Angers (France). On line event, <https://www.rfl-legumineuses.com/> (communication orale)

Boeglin L., Limami A.M., **Fustec J.** 2021. Ramification du système racinaire du pois en réponse au nitrate et Rhizobium pour un meilleur contrôle des adventices dans les associations pois-colza. Rencontres Francophones Légumineuses - RFL3. 24-25 February 2021, ESA Angers (France). On line event, <https://www.rfl-legumineuses.com/> (communication orale)

Cheriere T., Lorin M., Corre-Hellou G. 2021. Associations d'espèces : un levier pour favoriser l'insertion de légumineuse ; exemples d'associations innovantes à base de soja. RFL3. 24-25 February 2021, ESA Angers (France). On line event, <https://www.rfl-legumineuses.com/> (communication orale)

Bousselin X., Baux , Valantin-Morison M., **Lorin M., Cassagne N. , Hédan M. ,** Nussbaum V., Guillet R., Fridén L., Izard M., Kneib C., **Fustec J.** 2021. Plantes de services : choix des espèces de légumineuses gélives au sein des mélanges d'espèces associés au colza d'hiver. RFL3. 24-25 February 2021, ESA Angers (France). On line event, <https://www.rfl-legumineuses.com/> (communication orale)

Viguié L., Bockstaller C., Keichinger O., Angevin F, **Corre-Hellou G.** 2021. Les légumineuses dans des systèmes diversifiés : quels services et quels points de vigilance ? RFL3. 24-25 February 2021, ESA Angers (France). On line event, <https://www.rfl-legumineuses.com/> (communication orale).

Boeglin L., Limami A.M., Fustec J. 2021. Rhizobium effect on lateral root development of pea under various nitrate concentrations in the early growth: a phenotype study. Intercropping for sustainability: Research developments and their application (poster et pitch).

Fustec J., Cannavacciuolo M., Ben El Ghali M., Corre-Hellou G. 2021. DiVicia, un projet PRIMA pour la restauration de l'agrodiversité de vesces dans les systèmes céréaliers méditerranéens. RFL3. 24-25 February 2021, ESA Angers (France). On line event, <https://www.rfl-legumineuses.com/> (communication affichée + pitch))

Nathalie C., Baptiste D., Oddos L., Cannavacciuolo M., Fustec J. 2021. L'effet stimulant des vers de terre et des légumineuses dans l'environnement rhizosphérique du blé et du colza. RFL3. 24-25 February 2021, ESA Angers (France). On line event, <https://www.rfl-legumineuses.com/> (communication affichée + pitch)

Cheriere T., Lorin M., Corre-Hellou G. 2020. Intercropping: a tool for cropping system diversification. XVI European Society for Agronomy Congress, 1-3 September 2020, Sevilla, Spain. On line event (communication orale).

Bousselin X., Cassagne N., Baux A., Valantin-Morison M., Hedan M., Cannavacciuolo M., Lorin M., Fustec J. 2020. Choosing service plant for intercropping with rapeseed based on plant-plant and plant-soil interactions. XVI European Society for Agronomy Congress, 1-3 September 2020, Sevilla, Spain. On line event (communication orale).

Boeglin L., Friant C., Peligry C., Limami A.M., Fustec J. 2019. Early nodule detection by staining with 2,3,5-triphenyltetrazolium chloride. Third International Legumes Society Conference, 21-24 May 2019, Poznan, Poland. (Poster).

Cherière T., Lorin M., Corre-Hellou G. 2019. Soybean based intercrops effects on soil mineral nitrogen pool for the following crop. Third International Legumes Society Conference, 21-24 May 2019, Poznan, Poland. (Poster).

Baccar R., Corre-Hellou G., Bousselin X., Cherière T., Mauline M., Lorin M. 2019. Nitrogen acquisition and allocation in lupin and its effects on the following cereal crop in agricultural conditions. Third International Legumes Society Conference, 21-24 May 2019, Poznan, Poland. (Poster).

Mahmoud R., Gaudio N., Casadebaig P., Gendre X., Bedoussac L., **Corre-Hellou G.**, Fort F., Journet E-P., Litrico I., **Naudin C.**, Violle C. 2018. A trait-based approach to understand and predict the performance of arable annual mixed crops. In proceedings of International Conference on Ecological Sciences (sfécologie2018), 22-25 October 2018, Rennes, France, pp15-16. (comm. orale)

Corre-Hellou G., Carton N., Dayoub E., Deneufbourg F., Bouet S., Janus F., Piva G., Naudin C. 2018. Spatial diversification to reduce the use of herbicides. XV European Society for Agronomy Congress, 27-31 August 2018, Geneva (CH).

Revoyron E., Vidal A., Cassagrande M., Jeuffroy M.-H., Lebail M., Mawois M. 2018. Trajectories of Legumes insertion in farms: methodological framework for the analysis of long-term changes Advances in Legume Science and Practice, Association of Applied Biologists Conference, 21 - 22 March 2018, Jury's Inn, Glasgow (UK).

Drut B., Cassagne N., Cannavacciuolo M., Brauman A., Le Floch G., Cobo-Diaz J.F., Fustec J. 2018. Mobilization of interactions between functional diversity of plant and soil organisms on nitrogen availability and use. Advances in Legume Science and Practice, Association of Applied Biologists Conference, 21 - 22 March 2018, Jury's Inn, Glasgow (UK).

Baccar R., Hellou G., Fustec J. 2018. Dynamic of lupin-cereal intercrop and interaction with soil nitrogen during early stages of development., Advances in Legume Science and Practice, Association of Applied Biologists Conference, 21 - 22 March 2018, Jury's Inn, Glasgow (UK).

Bobille H., Fustec J., Robins J. R., Cukier C., Limami A.M. 2018. Amino acid fingerprint in the rhizosphere of *Pisum sativum* in response to water stress. Advances in Legume Science and Practice, Association of Applied Biologists Conference, 21 - 22 March 2018, Jury's Inn, Glasgow (UK).

COMMUNICATIONS ORALES SANS ACTES DANS UN CONGRES INTERNATIONAL OU NATIONAL

Mawois M., Revoyron E., Vidal A., Casagrande M., Jeuffroy M.-H., Le Bail M. 2018. Freins et leviers au développement des légumineuses dans les exploitations agricoles : Etude des trajectoires de changement technique dans des exploitations agricoles de deux territoires (Bourgogne et Pays de la Loire). Colloque de restitution finale du projet ANR Legitimes, 10 juillet 2018, Paris, France.

Lefort C. 2018. Environment impact during seed development on fennel seed germination quality. 2nd International Symposium "Carrot and other apiaceae", 19-22 septembre 2018, Krakow, Pologne.

Corre-Hellou G., Pelzer E., Journet E.P. 2018. Quantifier pour optimiser les services rendus par les légumineuses en exploitations agricoles. Séminaire de restitution du projet ANR LEGITIMES, 10 juillet 2018, Paris, France.

Bouet S., **Corre-Hellou G.** 2018. Implantation sous couvert et cultures associées en production de semences : intérêt et perspectives pour la maîtrise des adventices. SIVAL, 18 janvier 2018, Angers, France.

Fustec J. 2018. Les enjeux de l'augmentation de la diversité cultivée et les objectifs du projet SAFARI. Journée de restitution du projet PAO SAFARI, 9 avril 2018, ESA Angers, France.

Drut B. 2018. Interactions entre couvert végétal et organismes du sol pour une meilleure nutrition des plantes. Journée de restitution du projet PAO SAFARI, 9 avril 2018, ESA Angers, France.

Cassagne N. 2018. Effet de la diversité génétique des blés sur les nématodes et le fonctionnement biologique du sol. Journée de restitution du projet PAO SAFARI, 9 avril 2018, ESA Angers, France.

Lorin M. 2018. Utiliser les plantes de service pour gérer les adventices. Les entretiens de l'AEI, « Les couverts végétaux dans une perspective post-glyphosate ». 1ères Journées Agrodiversité : « Comment augmenter l'Agrodiversité dans les systèmes agricoles ? », 21, 22, 23 février 2018, ESA Angers, France.

Fustec J. 2018. Interactions entre les racines du colza et des plantes compagnes dans une association, et impact sur la disponibilité soufrée. Etude des complémentarités racinaires (colza/féverole). Assemblée générale de l'Association BASE. 1ères Journées Agrodiversité :



« Comment augmenter l'Agrodiversité dans les systèmes agricoles ? », 21, 22, 23 février 2018, ESA Angers, France.