



Press Release

FOR IMMEDIATE RELEASE

'Zoom into Soil': Zero Tillage – Wednesday 7 October

Following the continued success of Zoom into Soil, the British Society of Soil Science (BSSS) is pleased to host the third in its lunchtime webinar series.

'Zoom into Soil: Zero Tillage' will feature Hannah Cooper and Russell McKenzie who will discuss the current academic literature related to zero-tillage, the extent to which it reduces greenhouse gas emissions compared to more common conventional tillage methods and how these methods compare in practice.

Zoom into Soil: Zero Tillage will take place on **Wednesday 7 October** from **12:00 – 1:00pm** and is free of charge for all delegates.

In her presentation, Hannah Cooper will highlight how changes in the management of agricultural soils can affect their role as a source or sink in the global carbon cycle, and the scale and composition of their greenhouse gas emissions. Agricultural greenhouse gas emissions are complex and heterogeneous, but the active management offers possibilities for climate change mitigation. Zero-tillage (where the seed is sown directly into undisturbed soil) is an increasingly popular strategy to minimise soil erosion, increase biological activity and promote greater soil aggregate stability. However, the extent to which zero-tillage reduces greenhouse gas emissions and increases soil carbon storage, compared to the more common agricultural practice of conventional tillage, is extensively debated in the literature and represents a crucial knowledge gap in the context of climate change mitigation.

For Farm Manager Russell McKenzie, 2020 has been an incredibly difficult year for a whole variety of reasons: in particular huge swings in extreme weather during the growing season and a pattern of extremes which is more regular now than it used to be, with climate change the key driver. Russell will set out how even with last autumn's difficult weather conditions, establishment of winter wheat was easier and better compared to those under tillage regimes on his farms. He will reflect on how yields at harvest saw the performance of no-till autumn wheat crops outperform the cultivated crops and will highlight the value of investing efforts into better soil management,

allowing soils to become more resilient to extreme weather conditions and far better able to support machinery and traffic water away under wetter conditions over time.

The webinar will be followed in November by the release of a Cross Journal Virtual Issue with 20 previously published papers relating to no-till farming from the European Journal of Soil Science (EJSS) and Soil Use and Management (SUM), available free to access online for a limited period in November and December.

To book a place at the seminar visit Go To Webinar:

<https://attendee.gotowebinar.com/register/1457343697217521678>

www.soils.org.uk

Ends

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Notes for Editors

- The British Society of Soil Science (BSSS) is an established international membership organisation and charity committed to the study of soil in its widest aspects. The society brings together those working within academia, and practitioners implementing soil science in industry. Soil scientists' research findings are essential for investigating the feasibility of agricultural, landscaping, construction, conservation and archaeological projects. Our members are employed by both private and public sector institutions including academic universities, conservation charities, construction companies and consultancies.
- Participants can register for the September seminar via the Go To Webinar link: <https://attendee.gotowebinar.com/register/1457343697217521678>
- Hannah Cooper is a Research Fellow at the University of Nottingham, where she previously undertook her PhD. Her research interests predominantly focus on the impact of climate, vegetation and soil processes on the cycling of carbon and nutrients and quantifying trace gas fluxes to the atmosphere in a variety of terrestrial ecosystems. Hannah's earlier research focused on tropical peatland ecosystems. Through a fieldwork campaign in Kuala Selangor, Malaysia, she and her colleagues assessed the impact of conversion from peat swamp forest

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to oil palm plantation on greenhouse gas emissions and the stability of tropical peatland carbon, in work recently published in Nature Communications. Her doctoral research focused on the impact of different agricultural tillage practices across the UK and Brazil on greenhouse gas emissions, carbon storage and soil structure. Currently, Hannah is working on the GCRF project LegumeSELECT, which is a multidisciplinary study aimed at increasing the contribution of legumes to smallholder livelihoods in Sub-Saharan Africa (SSA) by facilitating data driven selection of appropriate legume crops to meet the needs of farmers.

- Russell McKenzie is Farm Manager for John Sheard Farms on the Cambridgeshire/Bedfordshire border, a predominantly heavy clay soil type across 995 hectares, 4 units with cropping including winter wheat, oilseed rape, winter beans, spring wheat, spring barley and spring oats. A 2014 Nuffield Scholar researching “Success with no-till under any conditions” saw him travel to Australia, New Zealand, United States, Brazil and Argentina to visit some of the best no-till practitioners in varying extremes of climate to gain a better understanding of how to make no-tillage work in both wet and arid climates. Following his scholarship, Russell has been introducing no-till practices across the farms he manages. Although some are still not ready to convert fully, the advantages are clear to see where fields have been under longer term no-tillage. The extreme wet in the autumn highlighted the advantages of no-tillage and the ability to not only travel easier on wetter ground but provide better windows of opportunity for crop establishment under the most difficult of conditions. Russell also sits on the Cereals and Oilseeds board of AHDB as a grower member and attended the No-till on the plains conference in Wichita Kansas back in January to further research the benefits of Conservation Agriculture.
- The BSSS YouTube page, which includes the past two Zoom into Soil events, is available here: <https://www.youtube.com/channel/UCHHciYt47RFZLqcQ6QGkxg>.
- There will be a special November issue of the European Journal of Soil Science (EJSS) *Opportunities and Challenges in No Till Farming*, which will feature 16 newly published papers and will be available online to journal subscribers <https://onlinelibrary.wiley.com/journal/13652389>.

The release of the Special Issue will be accompanied by a Cross Journal Virtual Issue with 20 previously published papers relating to no-till farming from the EJSS and Soil Use and Management (SUM) that will be available free to access, online for a limited period in November and December.

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