This Newsletter is a communication medium within CATCH-C and towards interested public. Relevant direct links are highlighted in blue. Suggestions, questions and announcements from you are warmly welcomed and can be sent to hsteinm@gwdg.de or isabell.raschke@zentr.uni-goettingen.de

News to be presented at the website and any suggestions on this medium can be sent to frits.vanevert@wur.nl

NEWS

1. Annual project meeting February 3-5, 2014 – Revenge Ibérico

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Sobre el olivar, se vio la lechuza volar y volar.
Campo, campo, campo. Entre los olivos, los cortijos blancos.
Y la encina negra, a medio camino de Úbeda a Baeza.

Over the olive grove, You could see the barn owl fly and fly.
Fields, fields, fields. In between the olive trees, the white cottages.
And the holm oak, halfway between Úbeda and Baeza.

(Antonio Machado, Apuntes)

A winter never white passed soon and Spring came much too early. But not in Córdoba this time. Not far from a place called “el sartén de Espana” (Spain’s frying pan), February 3rd saw us freeze until our flesh and bones felt stiff as the famed jamón Ibérico. A silent revenge, perhaps, by the animals just carried off as we entered the snowy farm. A great field visit it was, nevertheless, our first encounter with the dehesa. Its rugged beauty comes with many difficulties, and one must be tough, it seems, to carve out a living here. We learnt of oaks and olives, ham and vertisolos, and those of us who filled the database could – finally – see in real life the place called “La Conchuela” (LTE17). I enjoyed the formula: first to see reality, then the numbers, plans and calculations. The sticky clay held on to us for long, and painted both the bus and the hotel. Then, a warm welcome awaited us in the university aula, where we had our formal start with the opening ceremony hosted by Carmen Galán (vice-chancellor of Foreign Relationships and Cooperation at the University of Córdoba), José A. Gómez, director of the Institute for Sustainable Agriculture-CSIC, and Francisco Bruno Navarro, Coordinator of the Organic Farming and Natural Resources area at IFAPA. The remainder of the first day, we had a concentrated look at each of the work packages, and received our advisors’ most appreciated guidance. The evening was spent in splendour, with visits to the Great Mosque, and dinner in the San Basilio quarter.

With WP2 already finished (well done, WU team!), we worked hard for the next few days on WP3-4-5-6, facing the truth that this is our third and last year with Catch-C. This three-year time frame presents a challenge, given the long preparations needed to set

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1 The CATCH-C project aims at identifying and improving the farm compatibility of sustainable soil management practices for farm productivity, climate-change mitigation, and soil quality. The project is carried out by a consortium of 12 partners, led by Stichting Dienst Landbouwkundig Onderzoek (DLO), The Netherlands.

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up surveys and databases. At the same time, however, it’s no less than exciting to see our many and long awaited results pop out now. We spent our days together very well, and found solutions, decisions and agreements on all tasks in each of the work packages. No better inspiration than a tight deadline! By the time of printing this newsletter, we are further ahead and I won’t repeat our notes and conclusions here. All WP leaders - please stay in touch with them ! - did a fine job in summarizing the agreed action points. Let us now move on full force.

I’m sure that I say this on behalf of all partners: “many thanks to Gema and the whole Spanish team for the excellent meeting, good spirits and cheerful paseos por Córdoba”.

2. Catch-C at the IFSA Symposium in Berlin
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At the 11th European IFSA (International Farming Systems Association) Symposium in Berlin on 1st - 4th April 2014 Catch-C results were presented and discussed. Members of the project were involved in several workshops such as Innovation, knowledge exchange and learning and Soil management: facilitating on-farm mitigation and adoption which was convened by Jan Verhagen and colleagues of the partner project SmartSOIL. Erwin Wauters presented the theoretical framework behind WP4, a sequential mixed method consisting of three steps which was developed by ILVO based on Ajzen’s Theory of planned behavior. In order to identify barriers and drivers for the implementation of best management practices in soil cultivation such as cover cropping or no-inversion tillage as perceived by farmers semi-structured interviews were conducted in 25 farm type zones (FTZs). In

the next quantitative step a large scale survey was developed to infer whether the previously identified factors have impact on a larger population of farmers. With focus group discussions these results will be discussed in more depth as a third qualitative step. Magdalena Werner’s talk focused on the first step. She presented the results of interviews with farmers in Germany and Austria that captured influencing factors for the implementation of sustainable management practices. Annette Pronk gave insights into first results of the Dutch farm surveys.

3. IUNG-PIB at the XIIIth European Society For Agronomy Congress
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Alicja Pecio as a representative of IUNG-PIB participated in the XLIth European Society for Agronomy Congress in Debrecen, Hungary. During the Congress, she presented two posters with results of the Catch-C project: The influence of soil tillage practices on the soil organic carbon stocks and The influence of soil tillage practices on the contents of soil organic carbon.

4. WP3 report finished: Impact of soil management practices on crop productivity, on indicators for climate change mitigation, and on the chemical, physical and biological quality of soil

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WP3 has collected and put together an extensive online database on experimental results from European long-term experiments, of which a report summarizing the main outcomes has just been finalized! The report focuses on the analysis of the effects of improved management practices on crop productivity, climate change and soil quality. The work has been carried out by five task groups, each studying the effects of soil management practices on a particular goal – expressed in a set of indicators. The goals are productivity, mitigation of climate change, biological soil quality, chemical soil quality, and physical soil quality.

The evaluation of improved management practices was based on data derived from 291 mainly long-term field experiments (LTEs). Comparisons between improved and currently applied management were computed as either response ratios or differences for the single indicators. A multiple linear model using climate, soil texture/clay content, the duration of practice, the type of crop (for productivity indicators) and the investigated soil depth as nominal factors was performed to evaluate which conditions mostly affected the impact of a practice. This overall report synthesizes the results from individual task reports (http://www.catch-c.eu/index.php/work-packages/70-wp3), and a qualitative assessment of the overall impacts of management practices is presented.

None of the investigated management practices could favorably contribute to all objectives, i.e. maintaining high yields and reducing cultivation costs, mitigating climate change and improving chemical, physical and biological soil quality. The studied management practices “non-inversion tillage” and “organic fertilization” including incorporation of crop residues represent important tools for farmers to increase soil carbon content and stock, thus improving physical, chemical, but also biological soil quality. However, CO₂ and, especially, N₂O emissions may rise as well. Despite the slightly negative overall yield responses, the range extends from yield losses to yield increases.

5. Promising agricultural innovations – deliverable 4.5

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Agricultural innovations describe creating ideas, techniques or practices which are new in particular environment and “provide the means of achieving sustained increase in farm productivity and income. Adoption is a mental decision by farmers to make full use of new idea(s) as the best cause of action” (Ornan et al. 2010: 178).

Within work package 4, with the help of all eight participant countries a report of fact sheets about innovation was compiled to bring ideas to the attention of farmers and advisors communities in other countries, who have not yet discovered these innovative practices.

The extensive documentation on methods / techniques / approaches includes an overview of a wide variety of innovations (see table 3 in the report). All innovations are presented as a clear separate fact sheet based on BMPs per major FTZ. Each innovative way supports the implementation of BMPs and assist farmers in reaching productivity, soil quality and climate change mitigation goals.

All 81 fact sheets are sorted by the categories of management practices [used in WP3] in the report. The categories “Rotation”, “Tillage” and “Nutrient Management” are represented by around 20 promising innovations, respectively. Most of the innovations for
“Rotation” include green manure as BMP or belong to maize. The category “Tillage” contains a lot of fact sheets describing technological innovations related to the two BMPs minimum / reduced tillage and controlled traffic farming. “Nutrient management” unifies a multiplicity of practices. For this reason, the fact sheets of this category reflect different kind of BMP related innovations (e.g. sensor based adoption of fertilization). This category is also combined with BMPs from other categories. All innovations summarized in our report mainly contribute to two or more CATCH-C goals and other aspects (e.g. economical and / or environmental) (see table 4 in the report).

This report of the CATCH-C project facilitates the transnational exchange of information about promising and existing innovations between participants and their associated stakeholders. Would you like to know more details? The report will be published soon on the CATCH-C website (www.catch-c.eu).

6. **Final event in Brussels on 19th November 2014**

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As most of you already know the final event of our project will take place in Brussels at the Representation of Niedersachsen Rue Montoyer 61 on 19th November 2014.

Results and experience from agricultural research on soil management across Europe will be brought together to gain more insight into the future options for soil management: What are important barriers for farmers to adopt sustainable soil management practices? And how can policy influence farmers’ decisions?

Besides the presentation of Catch-C results about farm types and best management practices, field experiments and farmers’ and policies’ options for sustainable soil management, representatives from DG Agriculture and DG Environment will give insights into their viewpoints and will join the round table discussion.

Online registration is now possible on the Catch-C website.