

Herbicides and our field

Report for SENSE A2 Activity

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Flyer for disclosure:



The flyer features a background image of a cornfield with a layer of straw mulch. On the left, a dark blue vertical banner contains the following text: 'Organiza' at the top, followed by logos for 'CENUR Litoral Norte Paysandú' and 'UNIVERSIDAD DE LA REPUBLICA URUGUAY'. Below the logos, the date and time '15 DIC 12.30 - 14.30 hs' are displayed in yellow. A location pin icon is followed by 'EEMAC, Ruta 3, km 363 Paysandú' and 'Salón Timbó'. The main title 'LOS HERBICIDAS Y NUESTRO CAMPO' is written in large, bold, dark blue letters across the bottom of the banner.

Organiza

CENUR Litoral Norte Paysandú

UNIVERSIDAD DE LA REPUBLICA URUGUAY

15 DIC
12.30 - 14.30 hs

EEMAC,
Ruta 3, km 363
Paysandú

Salón Timbó

LOS HERBICIDAS Y NUESTRO CAMPO

Intercambios sobre:

- ▶ ¿Qué sabemos sobre los efectos de mezclas de herbicidas en suelo?
- ▶ ¿Podemos cuantificar sus concentraciones en suelo?
- ▶ Actualización sobre programa de aplicaciones responsables.
- ▶ ¿Qué esperamos del uso de herbicidas en el mediano plazo?

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Dirigido a
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productores

Compartiremos
un almuerzo
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APOYAN

PROYECTO ANII

EEMAC
Estación Experimental
"San Mateo A. Carreras"

FACULTAD DE
AGRONOMIA

Facultad de
Psicología
UNIVERSIDAD DE LA REPUBLICA

Ministerio
de Ganadería,
Agricultura y Pesca

1. Introduction.

The A2 activity was named “Herbicides and our field”. This report summarizes the entire process, starting from the first idea to the realization of the activity and subsequent evaluation, as can be seen in the Figure 1. We invited mainly farmers and agronomists who work with plant protection products (PPP) in the context of extensive crop production farming systems to a 2.30 hour workshop. We proposed this workshop on the basis that (i) farmers need to know how far they can be affecting soils health under current agricultural practices and (ii) pesticide regulatory agency and policy makers need to consider additional endpoints, real application schemes, and field stressors to prove the safeness of PPP. Stakeholders and scientists were invited to participate by presenting information and discuss about this topic during the workshop. The expected goals to achieve were:

- 1) Facilitate the dialogue and build a network between different actors involved in pesticides use: farmers, agronomists, stakeholders and scientists from different disciplines.
- 2) Raise awareness among farmers about the potential environmental impact of PPP.
- 3) Create space for participants to express their concerns and feelings related to this topic and systematize the information in a report that may serve as inputs for further work.



Figure 1. Timeline of the A2 activity.

The participants were mainly agronomists who work in the private sector advising farmers, or in different companies, for instance selling pesticides or services, but also some farmers and members of the academic sector. Overall 71 persons assisted to the activity that took place the 15th of December 2022, in Estación Experimental M.A. Cassinonni, Paysandú –Uruguay.

The organization of the activity was in charge of the PhD student Isabel García, who invited other three scientists to join the organizing committee, and also become speakers in the activity.

2. Organization

The organizing committee



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For organizing the activity and also become speakers in the workshop, we invited people from different areas other than mine:

- 1) Agronomist: She is a renowned scientist but also works directly in the field with farmers and agronomists. She was a very important part of the organizing committee, and she did the link between the target audience and the speakers.
- 2) Chemistry: she presented different tools to quantify pesticides residues in soils and also which is the protocol that farmers and agronomists should follow to sample soils and plants and save the samples for quantifying residues.
- 3) Psychology: He added his perspective and idea on how to conduct the workshop in a fruitful way. In the workshop he contributed to trigger the discussion and register agronomists and farmers worries.
- 4) Public policies: a person working on the registration and regulation of pesticides in Uruguay was invited to update farmers on the national program of responsible application of pesticides. He was not on the organizing committee but he was invited to the final discussion, after his talk.

We expect also his contribution *a posteriori* to manage and conclude from the qualitative information recovered in the workshop.

Politics, someone related to PPP registration and regulation of the government will be invited to inform the audience, but also to add their point of view to the discussion and stay linked to the network.

3. Activity. Summary of project outcomes in terms of societal impact, scientific communication and interdisciplinarity

We invited farmers and agronomists working with pesticides in extensive crop production systems to a 2.30-hour workshop, at the time that we shared lunch. We proposed this workshop on the basis that (i) farmers need to know how far they can be affecting soil health under current agricultural practices and (ii) pesticide regulatory agency and policymakers need to consider additional endpoints and conditions to prove the safeness of pesticides.

The organization was in charge of the Ph.D. student Isabel García, who invited other three scientists from different disciplines to join the organizing committee. Specifically, the questions addressed were i) What do we know about the effects of mixtures of herbicides on soils? Isabel García showed preliminary results from her Ph.D.; ii) How can we quantify pesticides residues on soils?, in charge of a chemist; iii) Update on a government program called “responsible applications”, in charge of a representative of the public policies; and iv) What can we expect from the use of herbicides in the medium term? Conducted by a psychologist, aiming to create space for participants to express their concerns and feelings related to this topic. The introduction and nexus were in charge of a renowned agronomist.

71 persons attended the activity that took place on the 15th of December of 2022, in Estación Experimental M.A. Cassinonni, Paysandú –Uruguay.

From a survey done to the audience at the end of the activity, 78% admitted to having had problems with herbicides, and 38% had problems with other pesticides in the field. 8% and 10% of the participants admitted not being aware of pesticide fate and pesticide effects in the environment respectively, while 59% and 67% acknowledged having expanded their knowledge on these respective topics. All of them were worried or very worried about future perspectives on the use of pesticides.

We strongly believe that a multidisciplinary approach and dialogue between different actors involved in pesticide use and regulation are the base for addressing this complex and non-sustainable way of producing.

The expected goals to achieve were:

- 1) Facilitate the dialogue and build a network between different actors involved in pesticides use: farmers, agronomists, stakeholders and scientists from different disciplines.
- 2) Raise awareness among farmers about the potential environmental impact of PPP.
- 3) Create space for participants to express their concerns and feelings related to this topic and systematize the information in a report that may serve as inputs for further work.

Estimated amount of working hours spent on the project (including preparation, execution and post-project activities): 110 hs

Link(s) to the project website or promotional materials (if applicable)

<http://www.eemac.edu.uy/index.php/comunicacion-y-extension/comunicacion/mas-noticias/1199-ultima-jornada-tecnica-en-la-eemac-sera-sobre-herbicidas>,
<http://www.cup.edu.uy/index.php/94-noticias/ultimas-noticias/4878-los-herbicidas-y-nuestro-campo-actividad-abierta-a-tecnicos-y-productores.html>,
<https://www.eltelegrafo.com/2022/12/realizan-jornada-en-la-eemac-para-abordar-los-herbicidas-y-el-campo-desde-la-interdisciplina/>

4. Reflection on developed skills and addressed points for improvement

By carrying out this activity I could prove to myself that I can organize and communicate some results of my Ph.D. to a broader audience, beyond the academic field. It meant adapting the way we address presentations, from content to vocabulary, slides, questions, etc. I had the opportunity to learn this from one of my supervisors, who is very experienced, and every minute devoted to preparing the presentation was extremely worthwhile. Moreover, I realized that farmers and agronomists are willing to learn about the approached problematic and expect us to give even more information.

I needed to get out of my comfort zone while giving notes for the local TV channel, and for the divulgation department of the experimental station where the event took place. It was necessary to reach the potential participants.

I am pleasantly surprised for including a social psychologist in the organizing team. Beforehand I was quite worried about working with someone from such a different background, but the experience was successful. His suggestions enriched the discussions, and make it possible to track the answers and systematize information about the perception and worries of the audience regarding this topic. Once more, relying on teamwork is the key to success.

We think that the selected communication channel was appropriate, as the audience exceeded expectations. We thought that 50 people would fit the purpose, and finally, we got 71 attendees. The place and time were well-valued by the participants, although they may have preferred another date for the activity. 95% of the participants rated the setting of the event with 4 and 5 out of 5 levels of satisfaction, including the timing for the talks and the time assigned for the exchange of ideas and questions.

I believe that this event highly contributed to start developing a network between different local actors involved in pesticide use, such as farmers, agronomists, scientists, and policymakers. But it will also require taking action soon to strengthen the net.

I also registered some important points for improvement:

- Allocate more time for the organization of the event. It was much more hard-working than I expected.
- Ask for the catering to be ready at least 3 hours in advance, so we do not have to run behind it at the last minute.
- Ask the participants to pay a minimum fee, so they do not fail to attend.
- It is also important to prepare some materials for the people who could not attend the activity. Could be something written or a video.

Overall, I believe that now I i) developed new skills to approach oral presentations for a new challenging audience, ii) I developed even more my multidisciplinary working skills, iii) I am better at organizing meetings and events.