

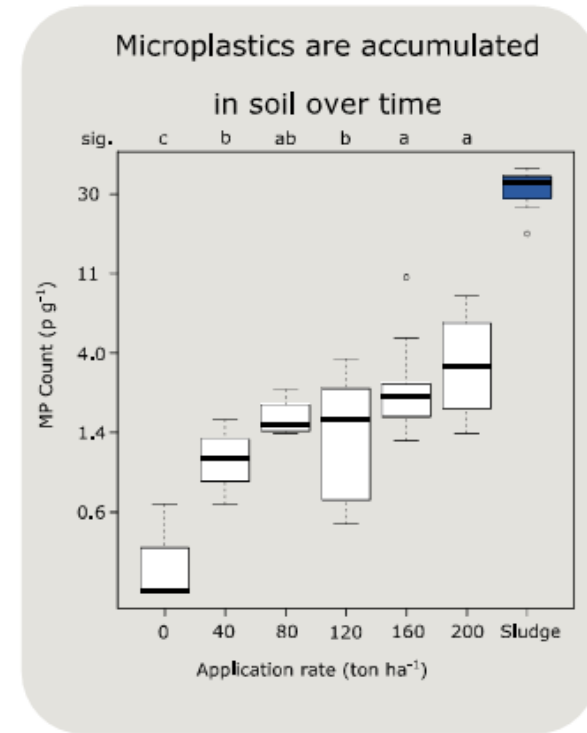
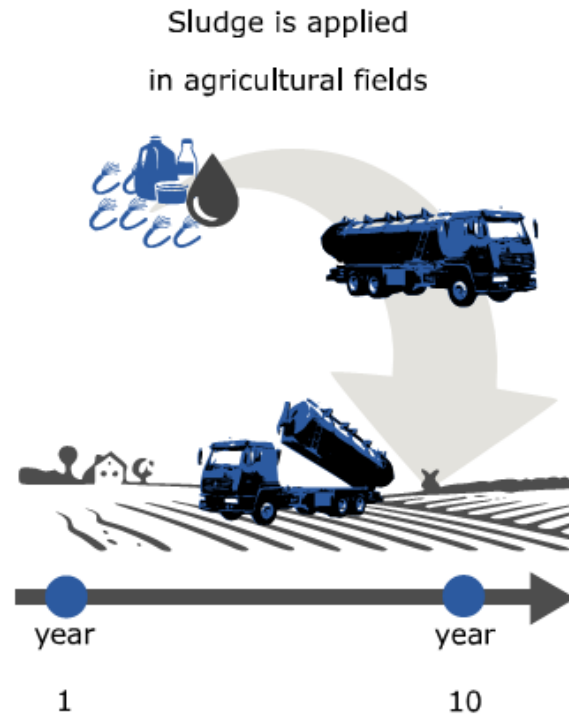
# Microplastics in the Terrestrial Environment

Esperanza Huerta Lwanga

Senior Researcher  
SLM group

Wageningen University & Research  
([esperanza.huertalwanga@wur.nl](mailto:esperanza.huertalwanga@wur.nl))

# Sources...



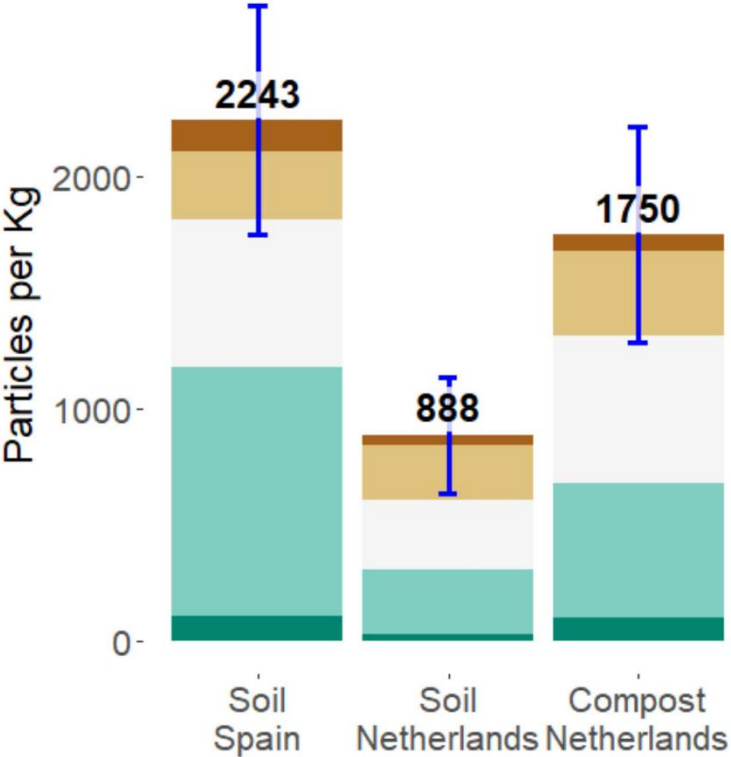
*Corradini et al. 2019*

# Sources...

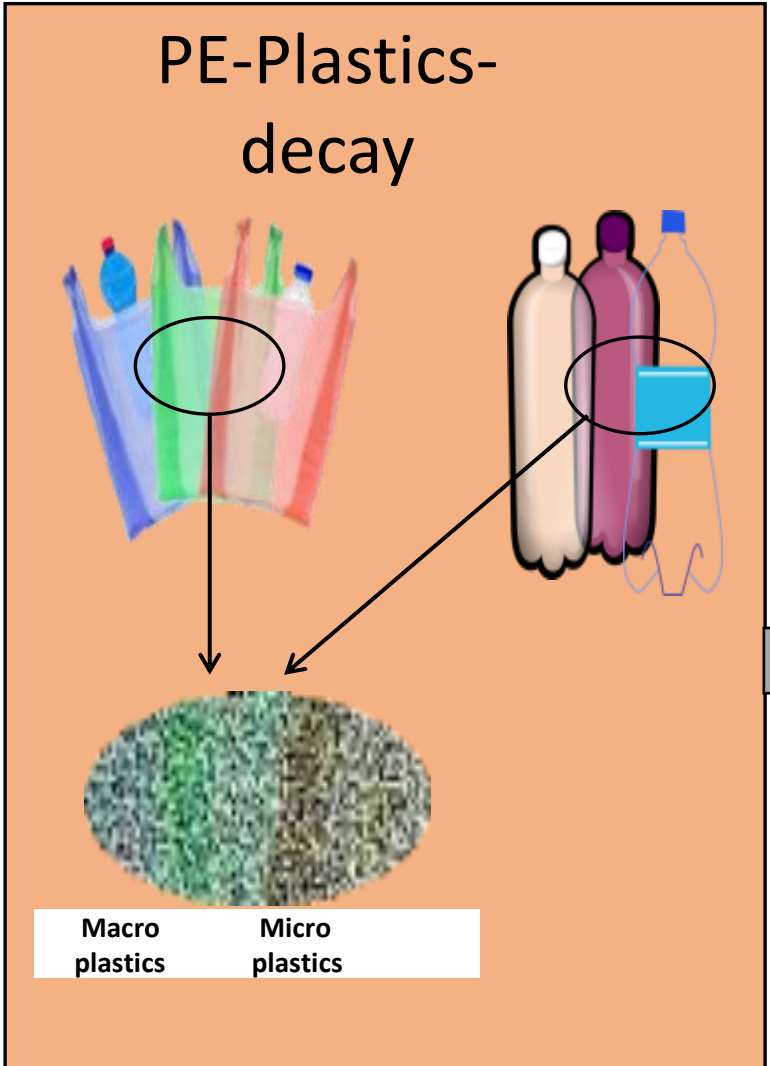


Microplastics size categories

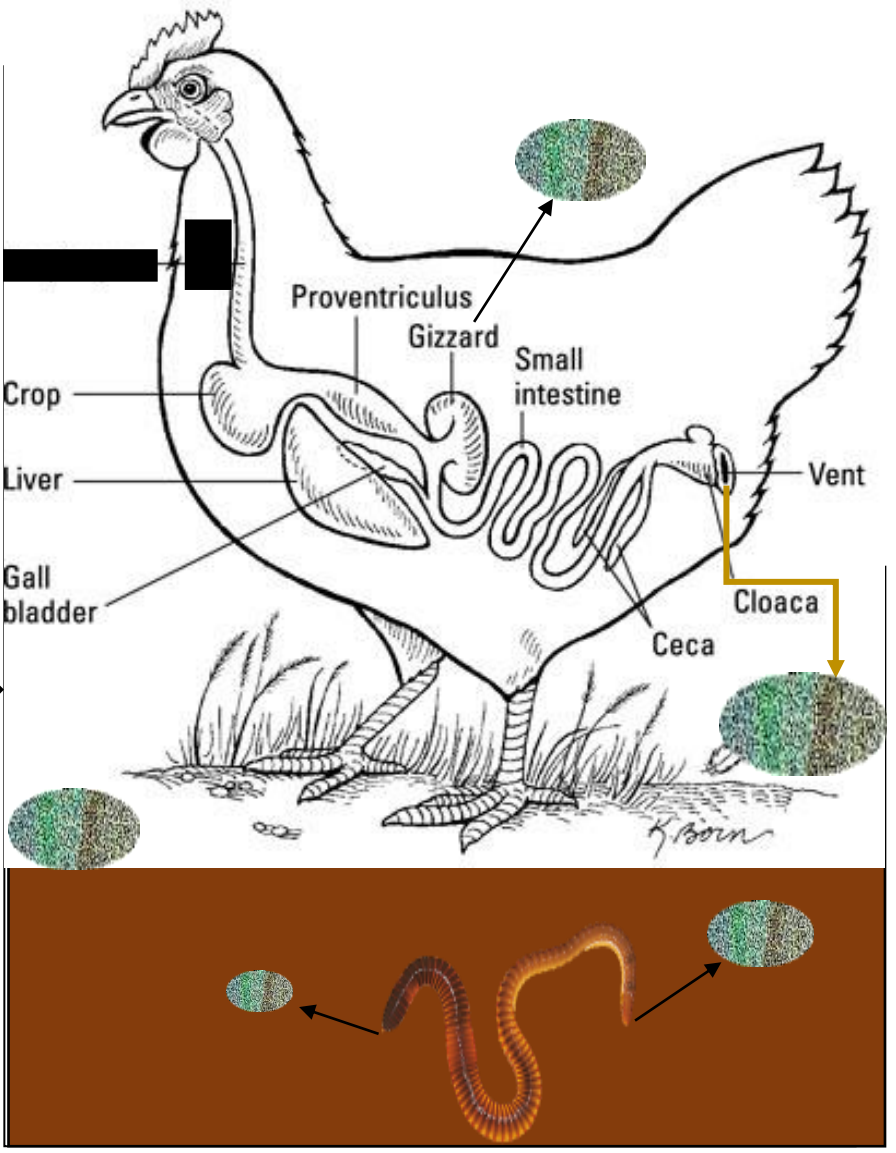
- > 500  $\mu\text{m}$
- 300-500  $\mu\text{m}$
- 200-300  $\mu\text{m}$
- 100-200  $\mu\text{m}$
- < 100  $\mu\text{m}$

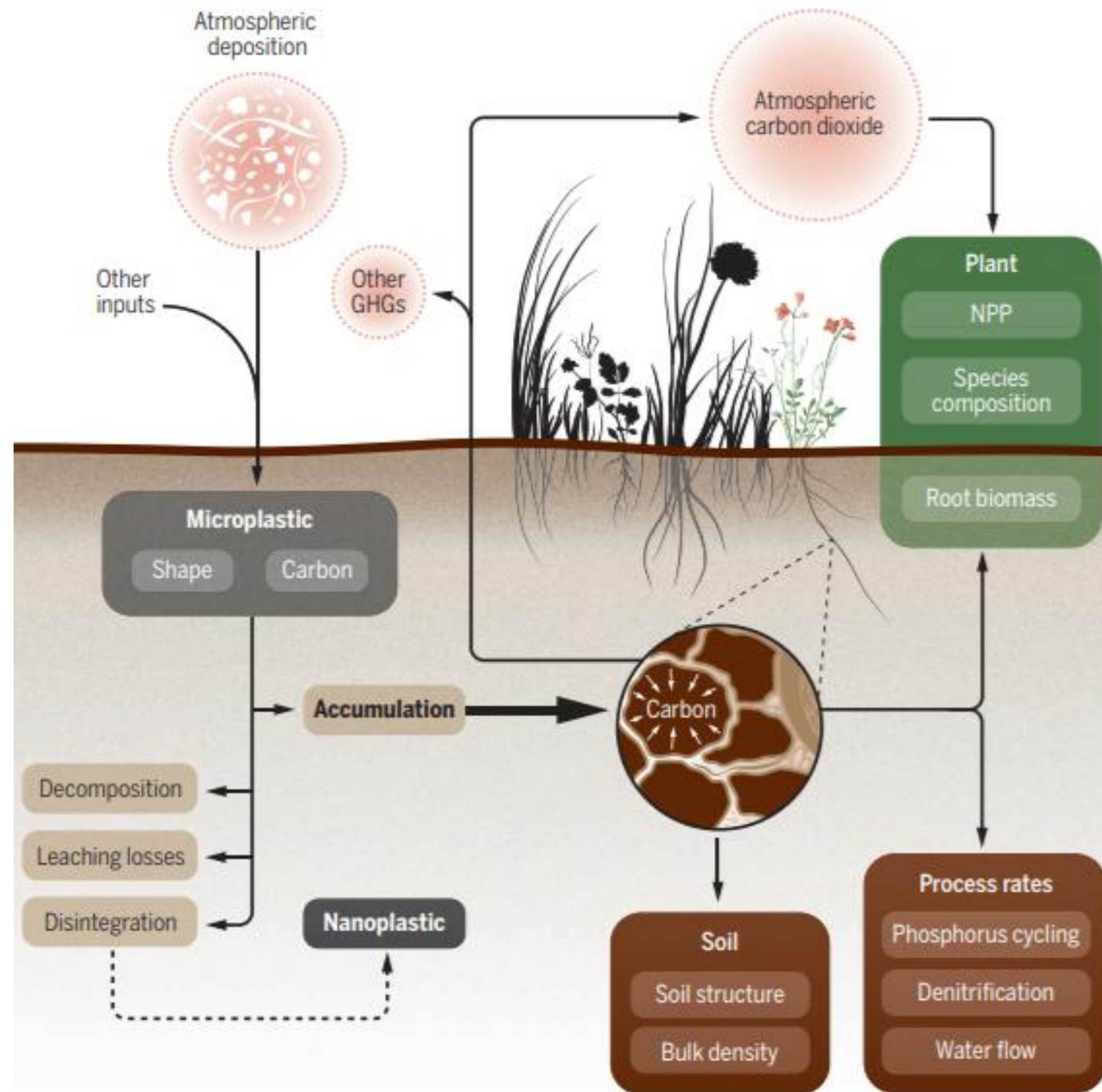


# Sources...



**Burn  
plastics**

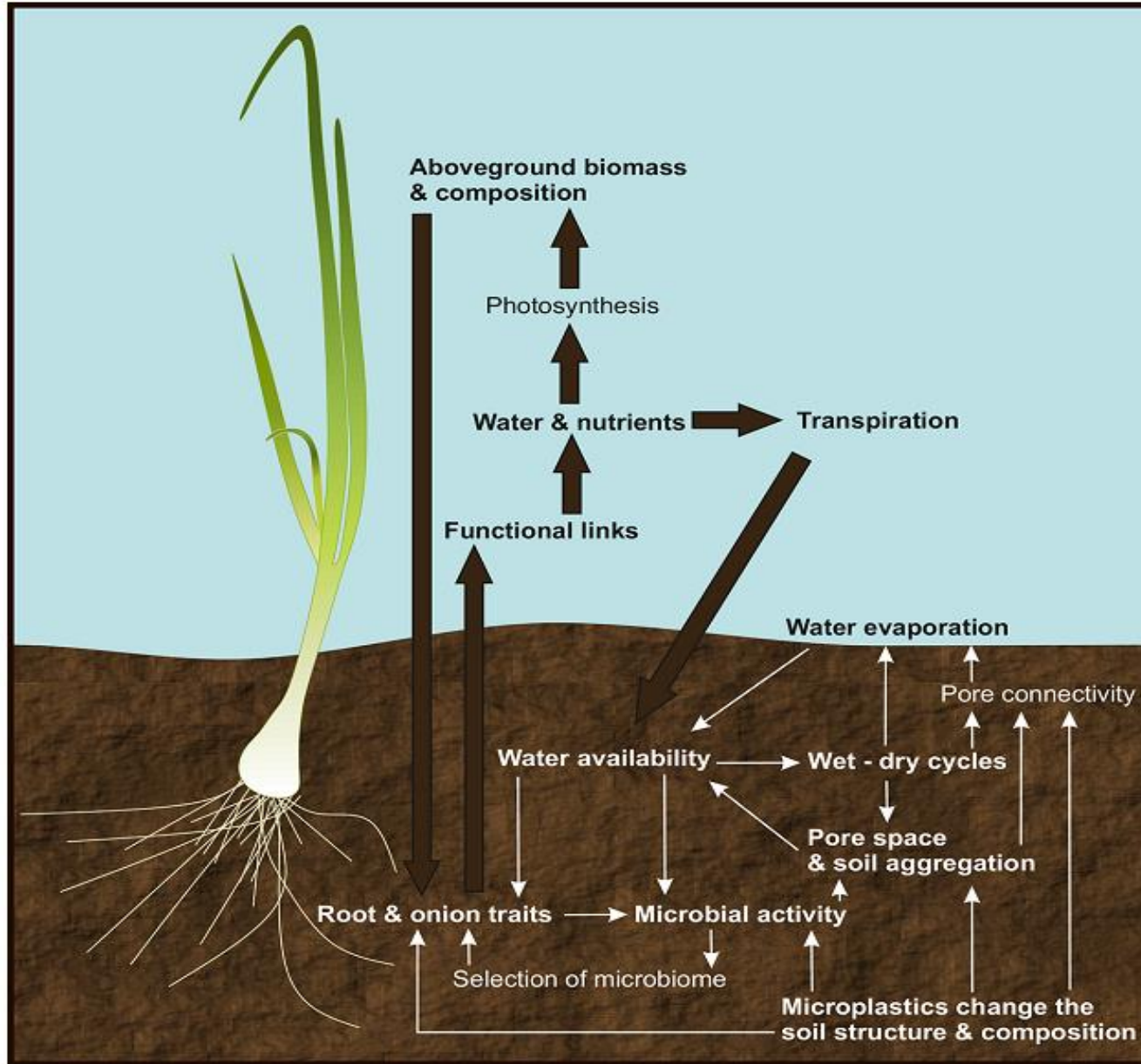




Rillig et al. 2020

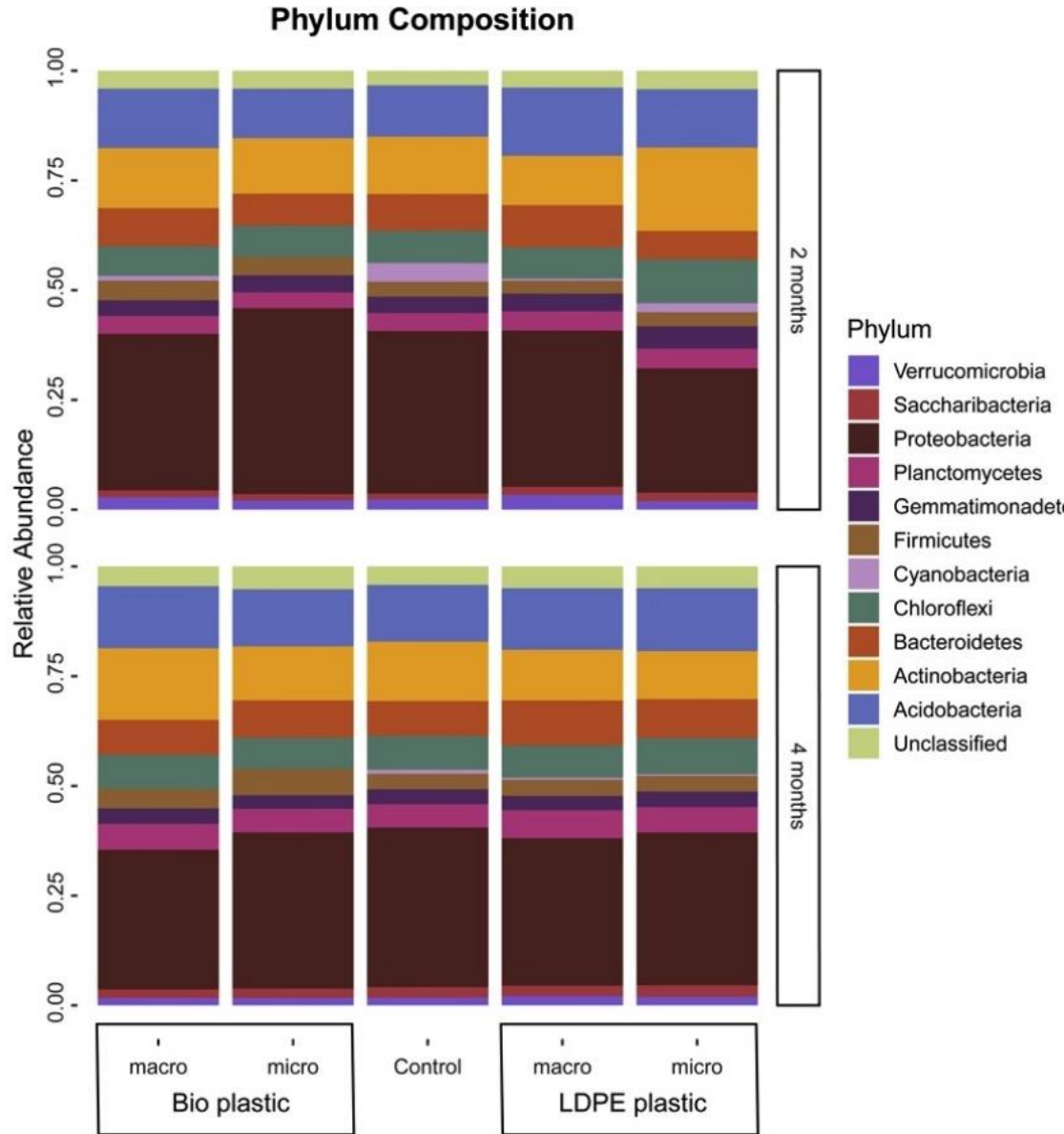
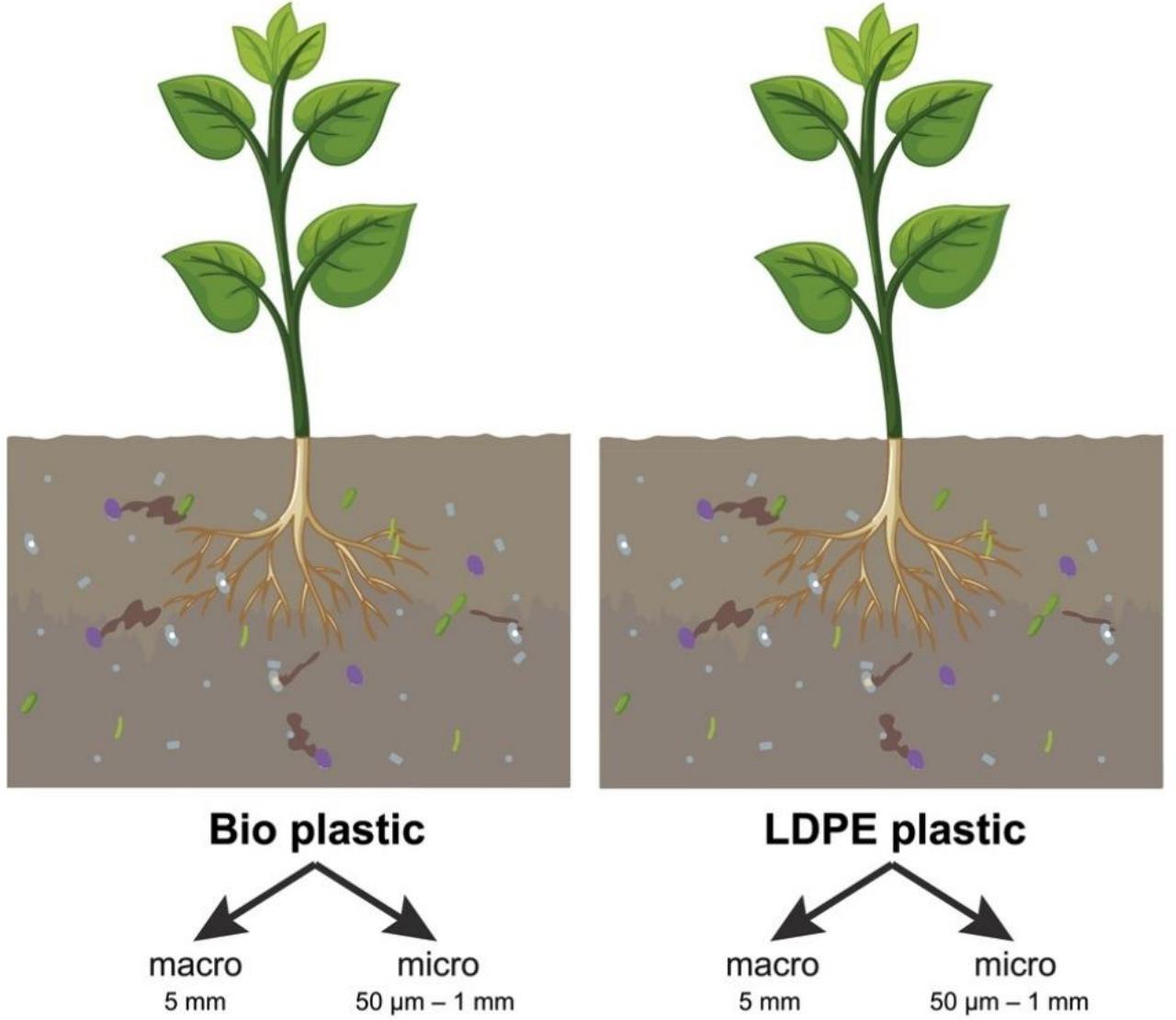


# Impact on soil-plant system...

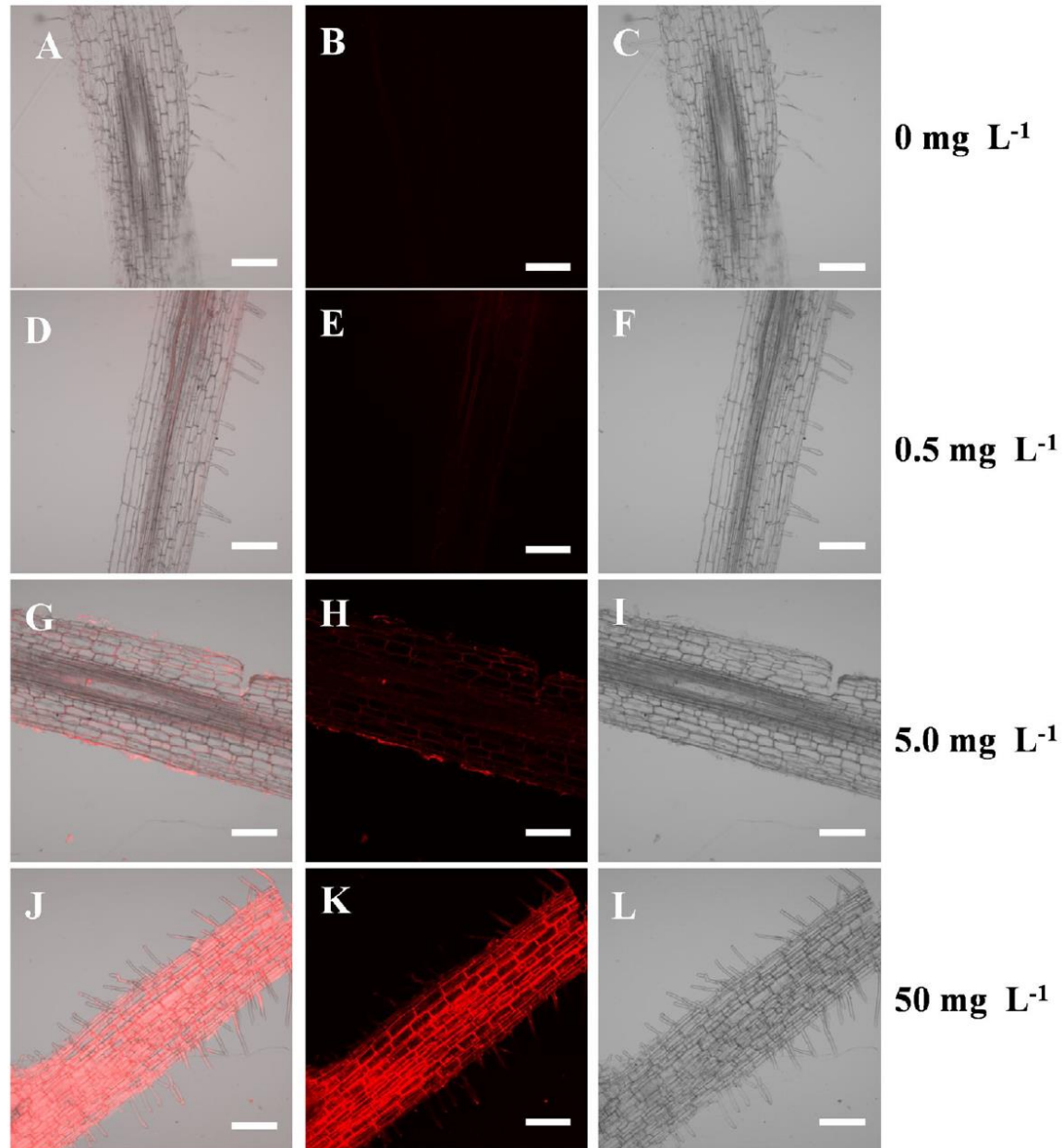


*De Souza de Machado et al. 2019*

# Impact on soil-plant system



# Microplastics Impact on plant roots



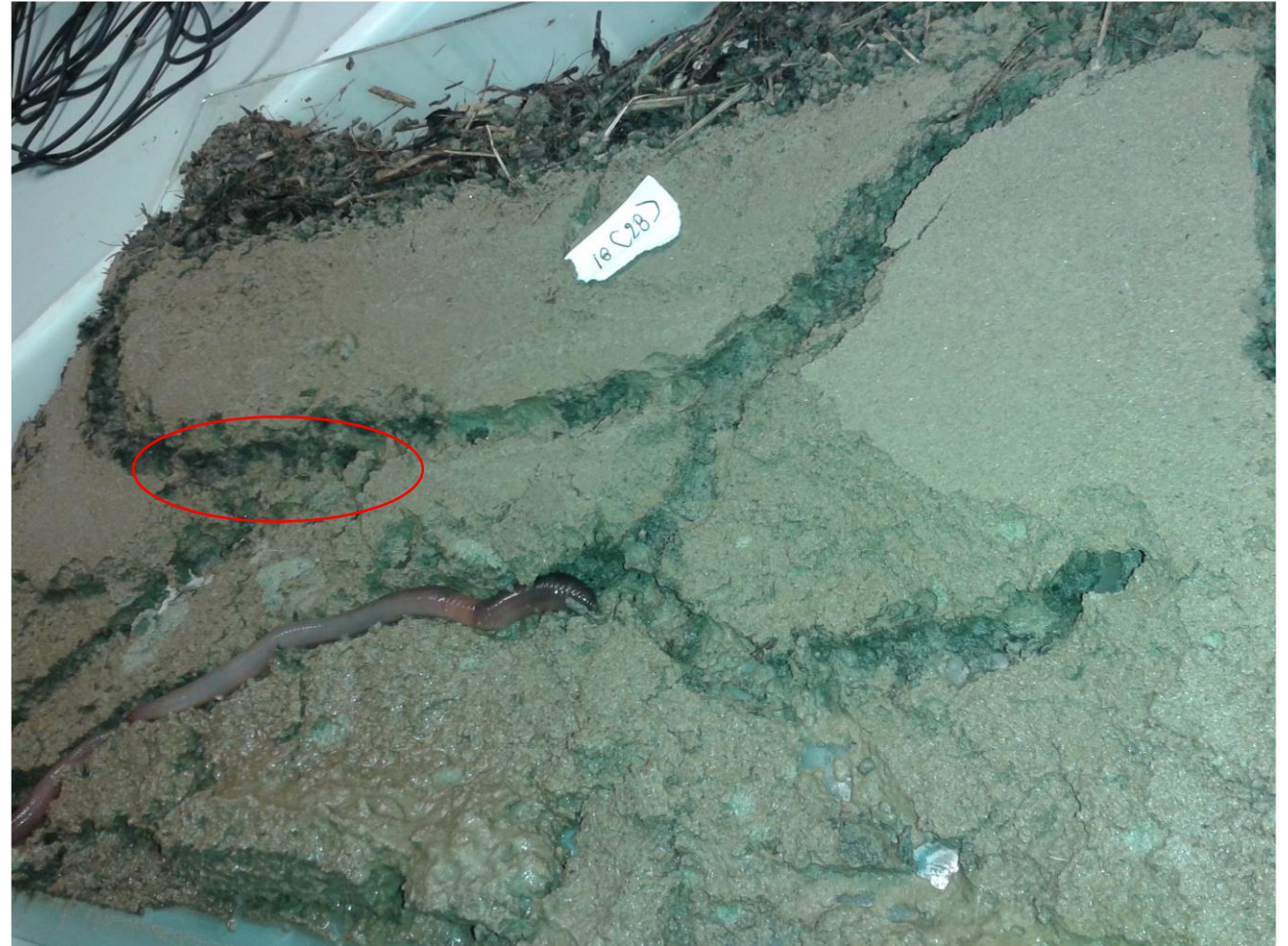
Accumulation of plastic beads in wheat roots,  
*Li et al. 2020*



# Impact on soil invertebrates

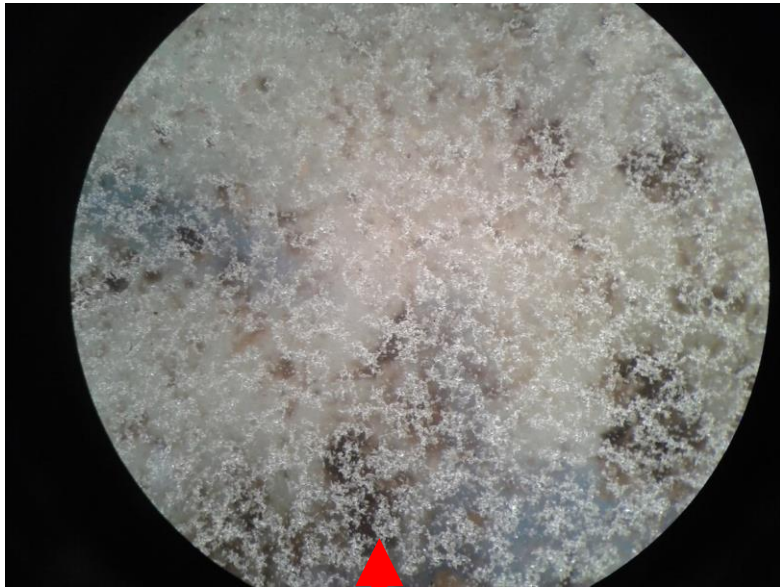


*Huerta Lwanga et al. 2016*  
*Huerta Lwanga et al. 2017*

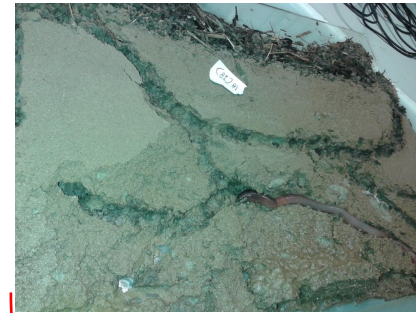




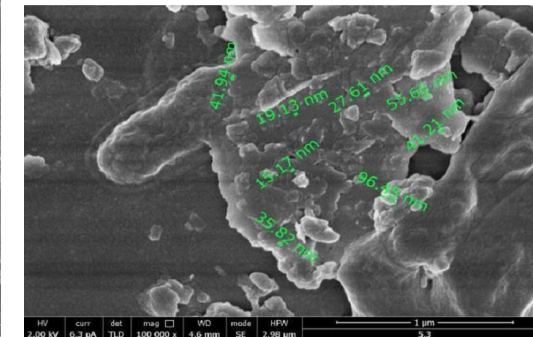
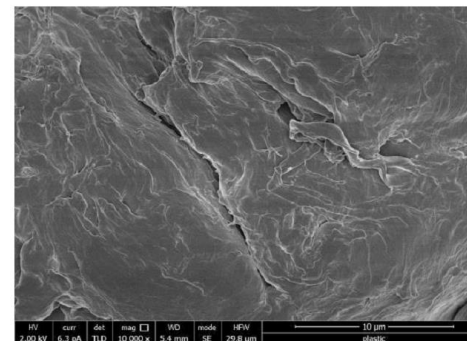
# Impact on soil invertebrates



Huerta Lwanga et al 2016



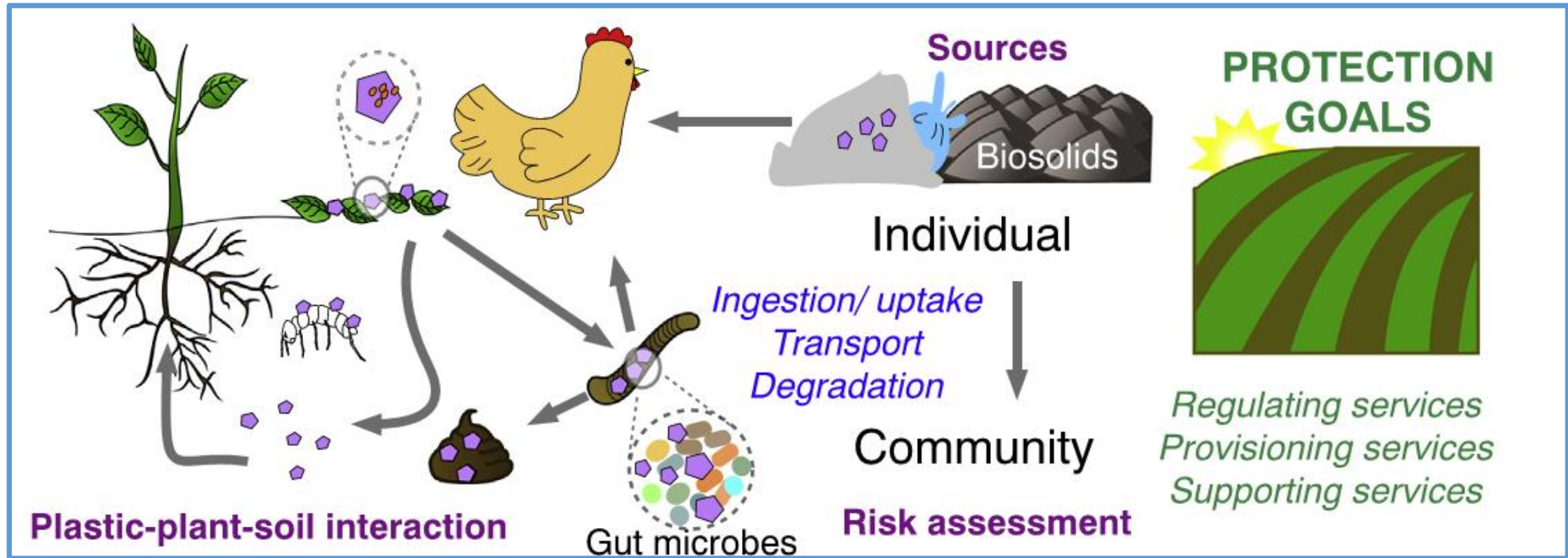
Use of the consortium: 60% LDPE degradation



Huerta Lwanga et al 2018

Presence of nanoplastics

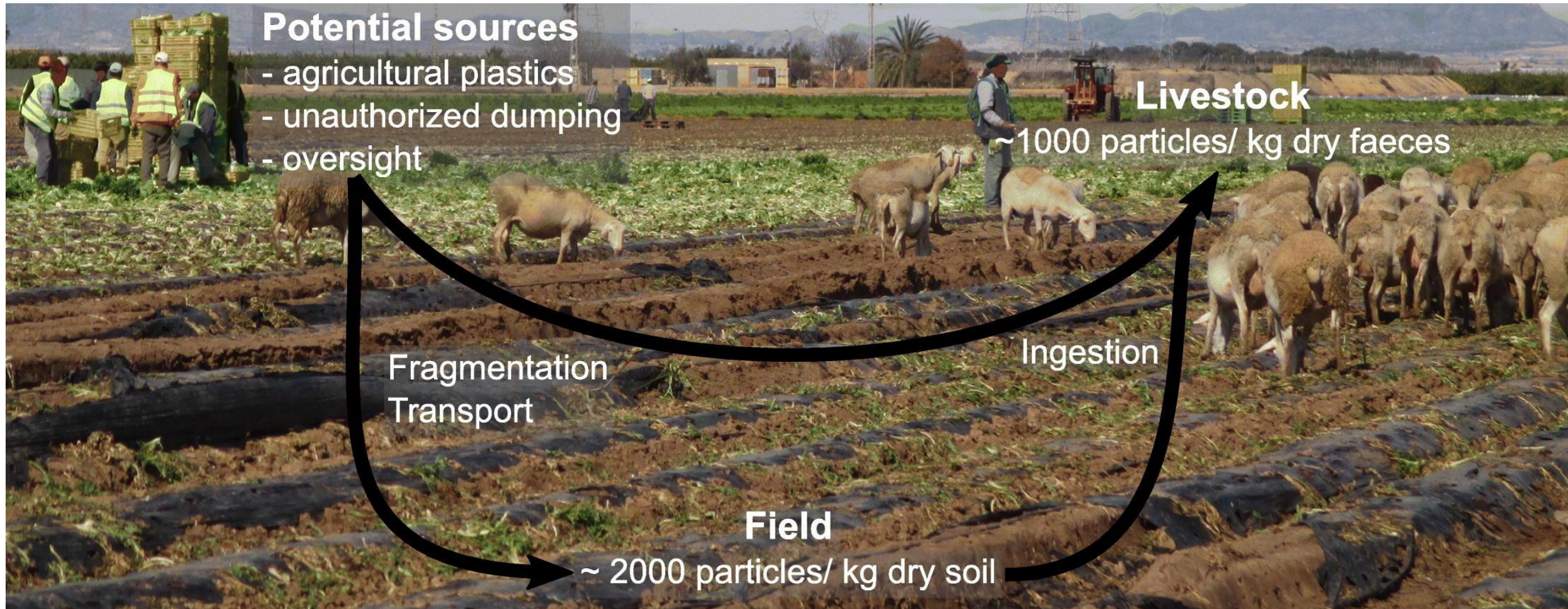
# Microplastics flow along the terrestrial food chain



Ee Ling et al. 2018



# Microplastics flow along the terrestrial food chain



*Beriot et al. 2021*





# MINAGRIS

**MICRO- AND NANO-PLASTICS IN AGRICULTURAL SOILS:**

Sources, environmental fate and impacts on ecosystem services and overall sustainability

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The MINAGRIS project will assess the impact of plastic debris in agricultural soils on biodiversity, plant productivity and ecosystem services and their transport and degradation in the environment. We will provide tools and recommendations for sustainable use of plastic in agriculture at the farm and field levels for ensuring safe and economically viable food systems in Europe.

Working together

<http://minagris.eu/>





Team work!

Thank you!!

