



# Impacts of Tarping on Soil Ecology

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- Silage tarps and clear plastic tarps function via different mechanisms (occultation versus solarization)



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**But what are the ecological effects of these two tarp types?**

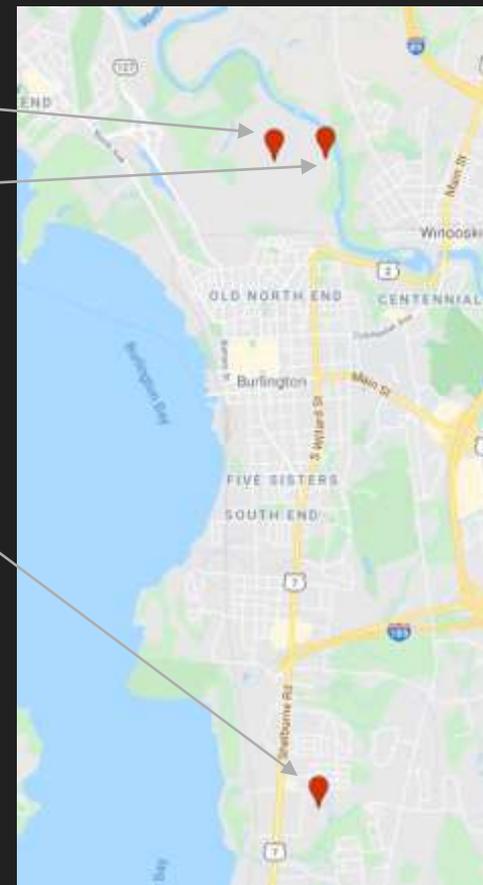


# Experimental overview

Diggers' Mirth Farm

Intervale Community Farm (ICF)

Catamount Farm



Silage tarp



Clear plastic



Control



5 mil plastic

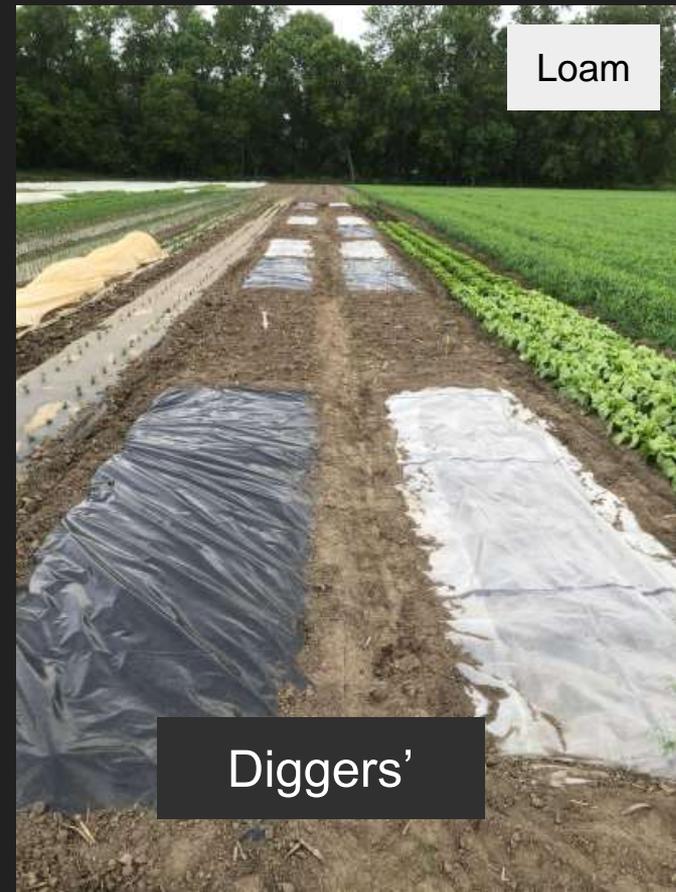
6 mil plastic

Applied frequent disturbance (weekly hoeing)

\*tarps were on the fields for 25 days

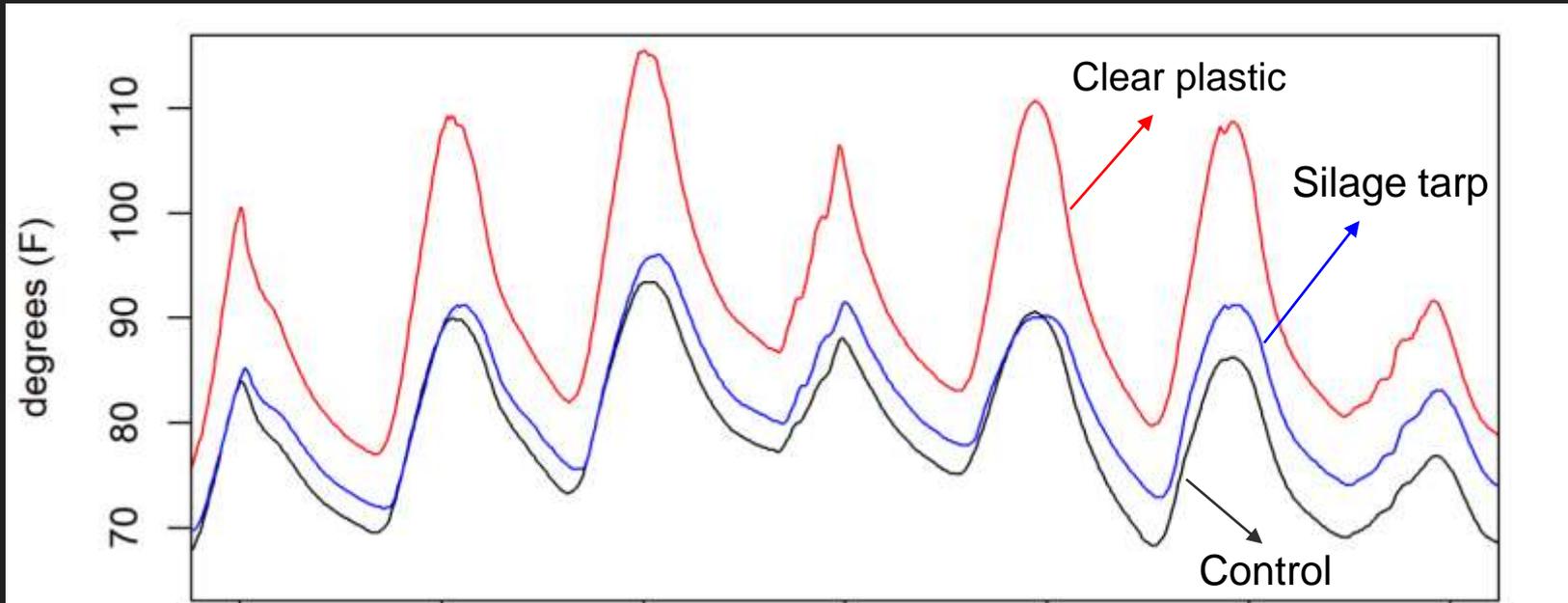
# Experimental design:

6 replicates of 3 treatments at 3 farms



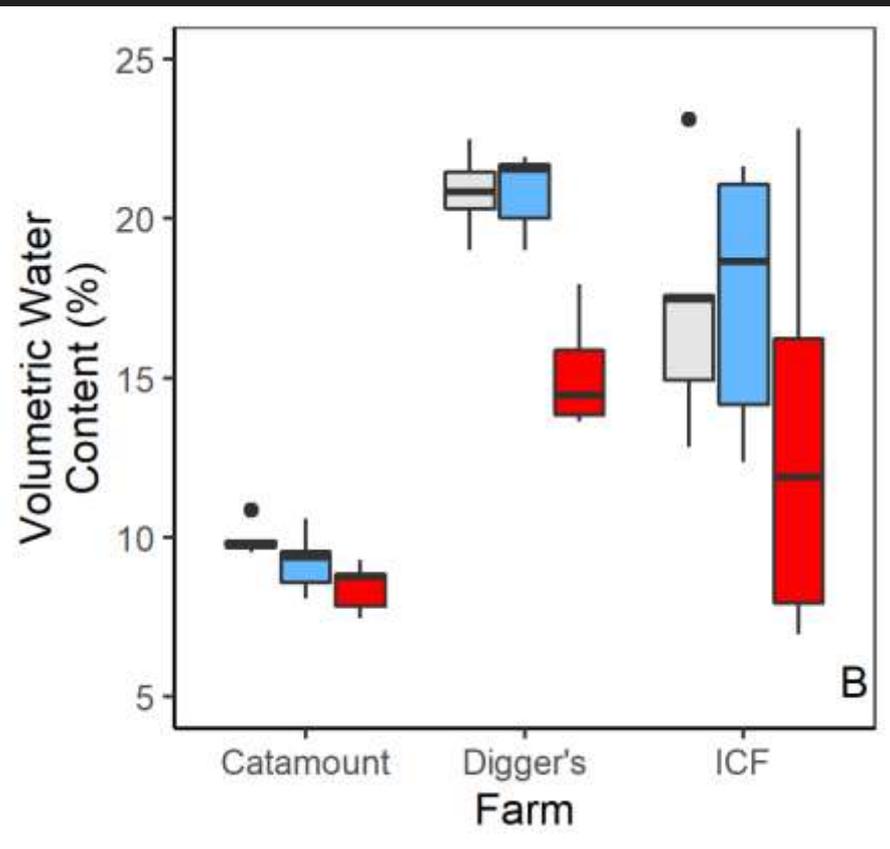
# Findings

# Soil temperature (10 cm below surface)

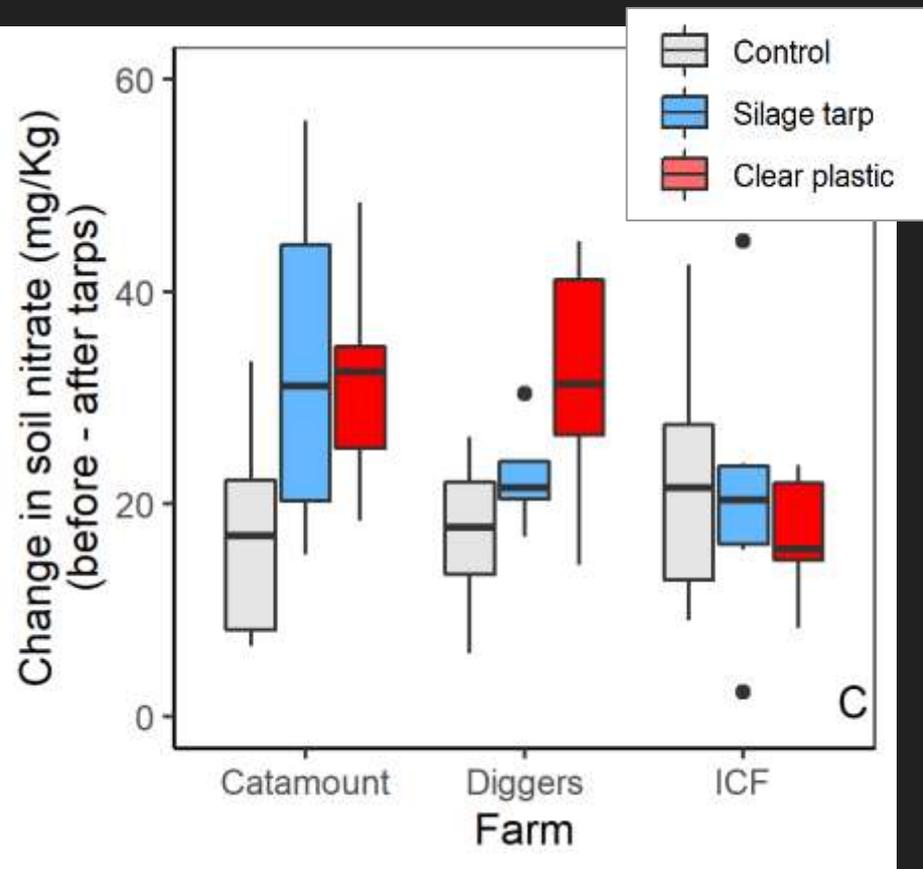


Daily trends

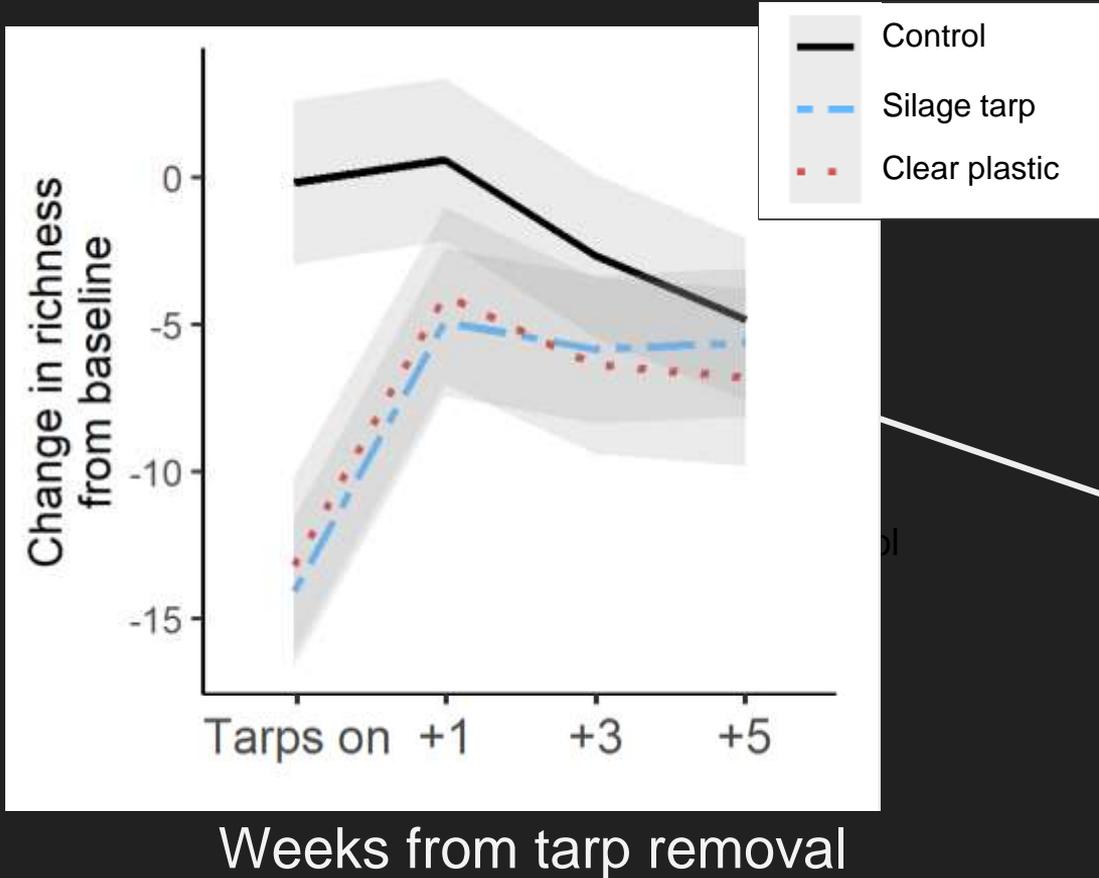
# Soil moisture



# Soil nitrate



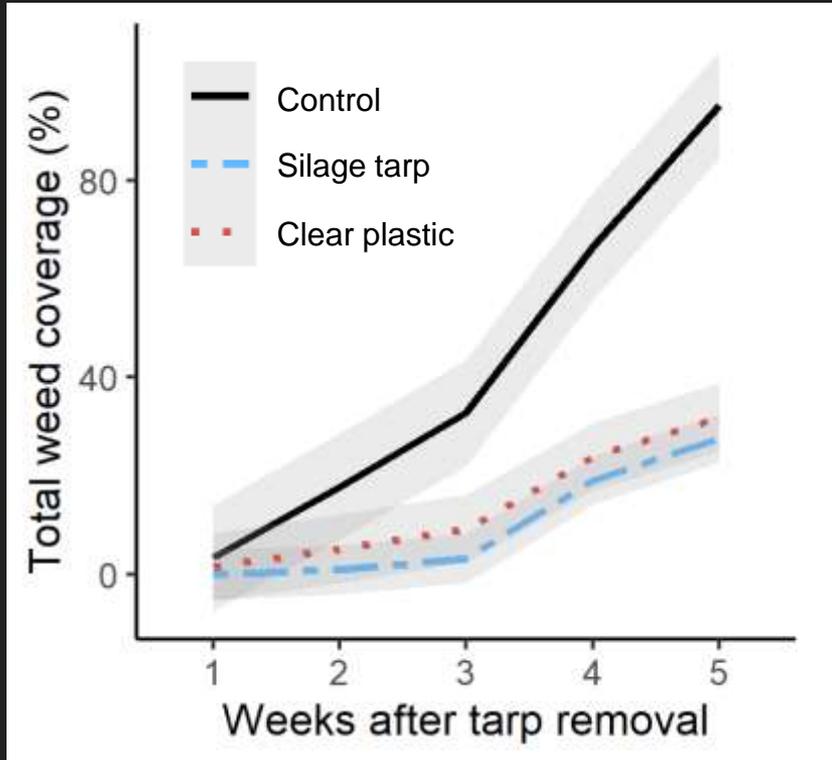
# Surface-active arthropods



Including organisms like:



# Weed coverage



Control

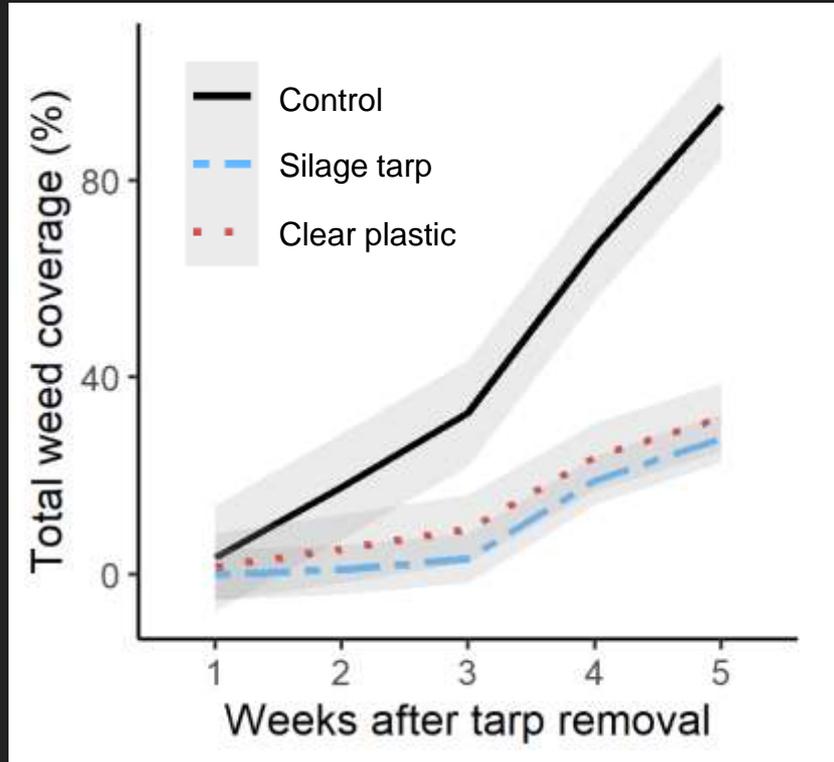


Silage Tarp



5 week after tarps

# Weed coverage



Purslane grew under the clear plastic tarps



# Take away message

Tarps:

- drastically heat soils
- can impact soil moisture and increase soil nitrate
- have short term impacts on soil arthropods
- are effective at controlling most weeds

... but there's lots still to learn!

# Many thanks!

Catamount, ICF, and Diggers'

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