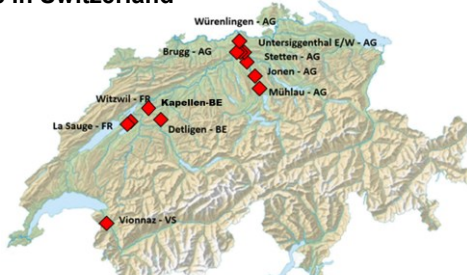




Paddy rice: A win-win for biodiversity and agriculture in a cool climate

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Paddy Rice in Switzerland



First 0.3 ha paddy rice field in 2017. Since then, the area increased to 19.5 ha in 12 sites in 2025. Yield is variable.

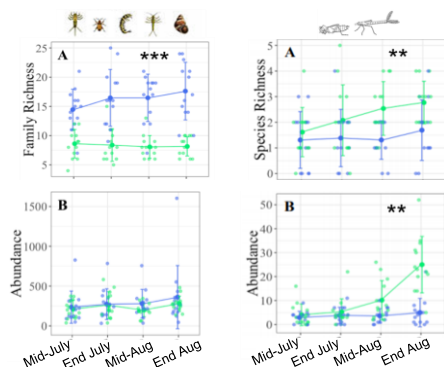
Supported as regional biodiversity promotion area (BPA)

if the following conditions are met :

- <110 kg N/ha fertilizer
- Early flooded ditch of 2m on one side of the paddy
- Wildflower area of $\geq 5\%$ of the paddy size with additional rock-, sand-, or branch piles



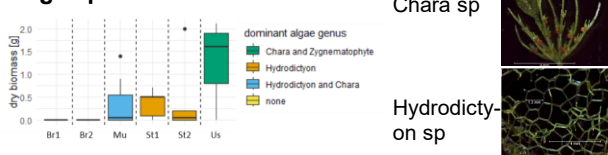
Macroinvertebrates in wetland and rice



Macro-invertebrates collected in 4 net sampling rounds in 9 paddies and wetlands in 2021.

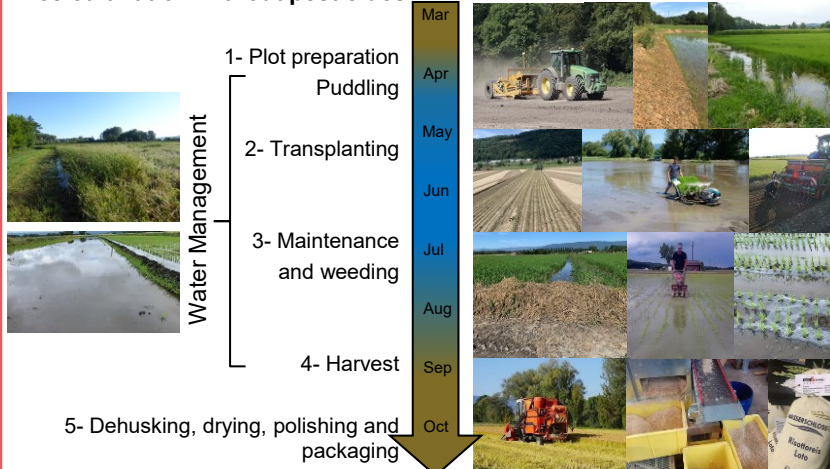
→ More macro-invertebrate families in **wetlands**, but more dragonfly species and higher abundances in **rice**

Algae presence is variable

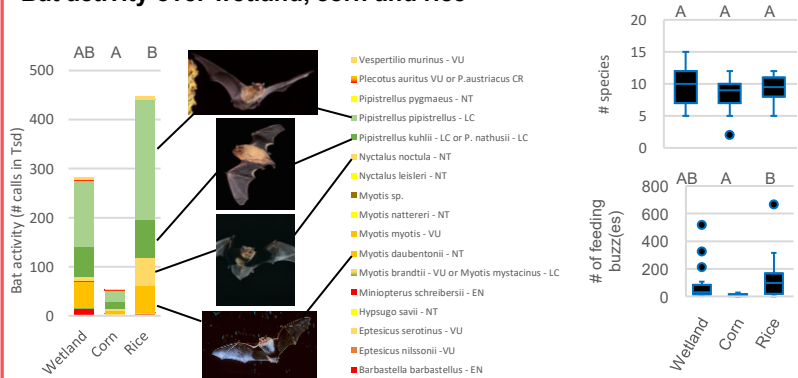


Rice biomass was not affected by algae. Algae biomass was highest in pots without organic or mineral fertilizer.

Rice cultivation without pesticides



Bat activity over wetland, corn and rice



Acoustic recording for 2h after sunset in 5 nights / season in 2021-22. → Similar species richness, but sign. higher call- and feeding activities in rice, compared to corn → More red listed species in wetlands

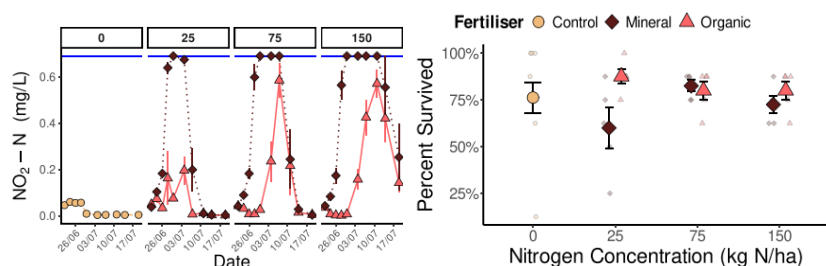
Dragon flies of 41 species

12 species breed successfully

No effect of fertilizer on dragon flies in a mesocosm experiment with 4 fertilizer concentrations



S. depressiusculum VU

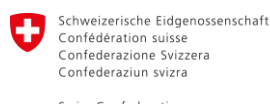


Conclusions: Paddy rice in Switzerland generates a valuable income for farmers and acts as habitat for wetland biodiversity.

- Red listed species profit from paddies
- Adds to the diversification of crops
- Acts as adaptation to climate change
- → A real alternative on wet arable fields also in cool climates!

Stay tuned for our studies on weed suppression, crop rotation, greenhouse gas emissions and amphibians on Nassreis.Agroscope.ch

Funding: SNF-Bridge Discovery, Ernst-Göhner Stiftung, Cantons AG, BE, FR, VD, VS



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