METADATA

SITE

Site name:

|  |  |
| --- | --- |
| Site description: | Oensingen (CH-OE2, canton Solothurn, Switzerland) is located at the southern edge of the bottom of the Jura Mountains. The site is managed as a typical intensive crop rotation under the Swiss Integrated Pest Management regime (IP Suisse).;  Longitude (WGS 84): 7°44'01.5 E;  Latitude (WGS 84): 47°17'11.1 N;  Altitude (m.a.s.l): 452;  Land cover (IGBP land classification): Cropland;  Soil type: Eutri-stagnic cambisol (FAO, ISRIC and ISSS, 1998. World Reference Base for Soil Resources.);  Geology: Alpine lime (50%), jurassic lime (15%), silicon dioxide (15%), conglomerates and crystalline rock (15%) (after: Mühlberg und Niggli, 1913, Geologischer Atlas der Schweiz GAS, 2003). |

DATA OWNER

|  |  |
| --- | --- |
| Name: | Alena Pavlackova |
| Address: |  |
| Email: | pavlackovaa@gmail.com |
| Name(s) of PI, supervisor(s): | Prof. Nina Buchmann |
| Collaborator(s), incl. contact info: | Fabio Turco |

PROJECT

|  |  |
| --- | --- |
| Type of work: | Research |
| Project title: | DONA |
| University: | ETH Zürich |
| Department: | D-USYS |
| Institute: | IAS |

MATERIAL & METHODS

|  |  |
| --- | --- |
| Experimental setup (incl. plot description, treatments, etc.): | Observational Data:  1. Vegetation indices computed from satellite images  a) Vegetation indices: NDVI, NDRE, MCARI, EVI, GNDVI  b) Satellite images: Copernicus Sentinel data - Harmonized Sentinel-2 MSI |
| Devices (incl. manufacturer and model type): | NA |
| Description of methods (or reference): | NDVI, GNDVI, MCARI: https://doi.org/10.1016/S0034-4257(00)00113-9  EVI: https://doi.org/10.1016/S0034-4257(02)00096-2  NDRE:https://doi.org/10.1016/j.rse.2011.10.021  Vegetation indices were computed for the site in Oensingen using shapefiles in GIS folder - "manual\_measurements\_area"  ATS\_Script\_Part02\_v230227.pdf for normalizing the indices  Description of code is in the README file |
| Tools: | Google Earth Engine (javascript), R |

DATA

|  |  |
| --- | --- |
| What was measured or described: | Vegetation indices (NDVI, NDRE, MCARI, EVI and GNDVI) and their correlation with N uptake, LAI, crop height |
| Replications / measurement frequency: | NA |
| Measuring period(s), date, daytime: | from 1.1.2021 to 12.9.2023 |
| Column description (acronyms) and units: | The column descriptions are in "GEE\_description.csv" |
| Data status (raw, gap filled, etc.): | code |
| Processing scripts / codes (R, Python, etc.): | for each individual vegetation index: NDVI.R, NDRE.R, MCARI.R, EVI.R, GNDVI.R Vegetation\_indices\_timeseries.R |

REFERENCES

|  |  |
| --- | --- |
| Publications : |  |

DATA POLICY

|  |  |
| --- | --- |
| Open access (CC BY-NC-SA) file(s): |  |
| Embargo (3 years) file(s): |  |
| Restricted file(s): |  |

KEYWORDS