Sentinels Looking after Agriculture
Copernicus Sentinel-1

- Launch: **S1a: 3rd April 2014, S1b: 25th April 2016**, ...
- Constellation of two satellites
- C-Band Synthetic Aperture Radar
- Nominal lifetime in orbit of 7 years (max. 12 yrs)
- 6 days revisit at equator with 2 satellites
- Sees through cloud cover!

Global land coverage
Every 12 days
S1 time series: Crop Stages

Backscattering coefficient [dB]

Vegetative phase
Reproductive phase
Ripening phase

06/10/14  2015  2016  02/09/17

Vegetative
Reproductive
Ripening
Copernicus Sentinel-2

- Launch: June 2015 & March 2017
- 13 bands (VIS, NIR & SWIR)
- 290 km swath at 10, 20 and 60 m
- Systematic acq. of all land and coasts
- 5 days repeat cycle with 2 satellites
- 7 years design lifetime (max. 12 yrs)
S2 time series: Crop Growth Monitoring at Field Scale

Leaf Area Index (LAI)

Contains modified Copernicus Sentinel data [2016]
Full Uptake of Copernicus within the CAP 2020

1th of July: Modernizing and simplifying the Common Agricultural Policy
Commissioner Phil Hogan, DG-Agri (25th of May, Press release): This new satellite technology will significantly reduce the number of field inspections, removing the climate of fear, which causes significant stress for farmers.
Sen4CAP – Expertise, Technology & Collaboration

- Paying Agencies & Farmers
- DG-Agri, JRC, DG-Grow
- EO Experts
- Continuous Monitoring
- Validated Performance
- National Demonstration
- Innovative Practices
- Cloud Technology (DIAS)
- CAP2020 Reform

ESA UNCLASSIFIED - For Official Use
Sen4CAP Pilot Countries

- Netherlands
- Spain
- Lithuania
- Czech Republic
- Romania
- Italy
National dynamic crop mapping at field scale

Full Resolution Visualization Online:
http://www.esa.int/spaceinimages/Images/2018/05/Crop_map
CAP: Crop Diversification Monitoring - Netherlands
"By teaming up with the ESA, we are gaining access to cutting-edge technology for the digital farming solutions of our subsidiary FarmFacts."
Thank you for your attention!

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