

YPSILON® – Yield Prediction by Satellite

National and regional yield forecasting using growth modelling and high-resolution satellite data

Product Description

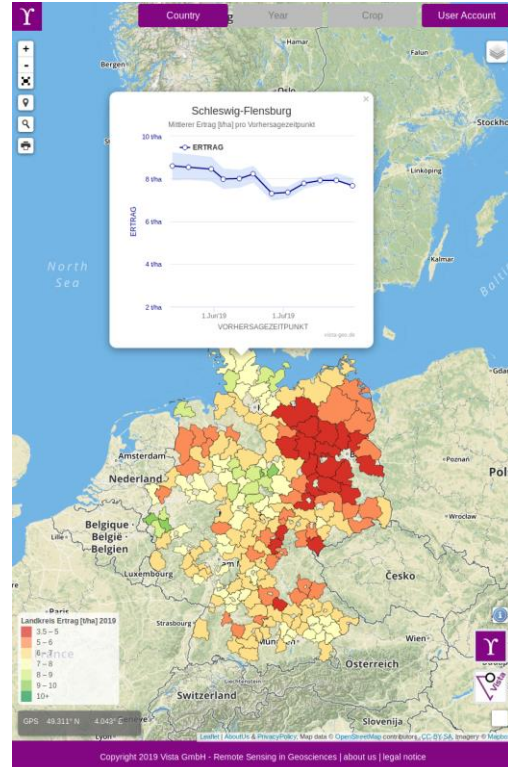
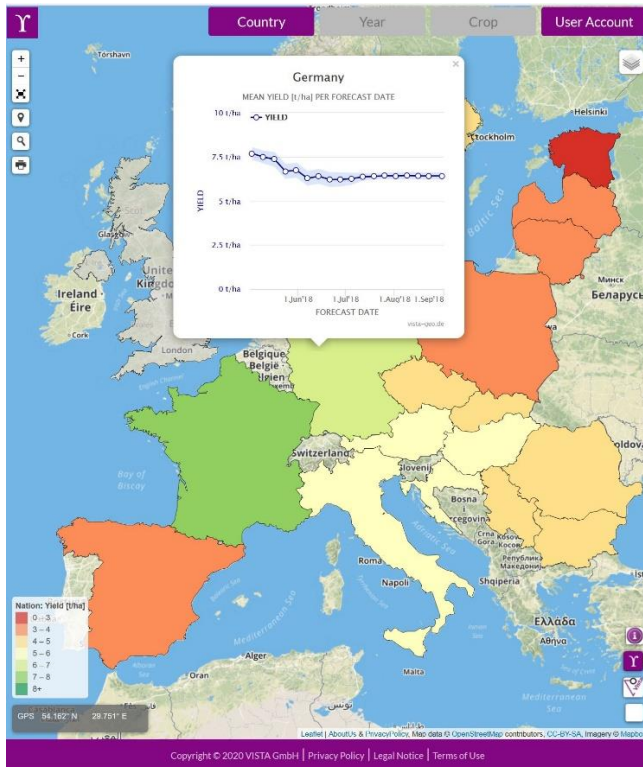
YPSILON® is an innovative regional and national yield forecasting service based on state-of-the-art satellite data and physically-based plant growth modeling developed and offered by the BayWa associated companies VISTA GmbH and BayWa Agri Supply Trade (BAST) / Cefetra. It enables large-scale yield prediction from 8 weeks before harvest. 2020 YPSILON® starts its first season of Europe-wide forecasts after conducting a three-year testing phase. In Germany, the weekly forecast was already available in 2019.

You can subscribe to the following products on the website <https://ypsilon.services> :

Demo	Europe	Germany	Custom
✓ Free of charge	✓ On request	✓ On request	✓ On request
✓ 19 European countries	✓ 19 European countries	✓ Germany on district level	✓ Custom region
✓ 2018	✓ 2020	✓ 2020	✓ 2020
✓ Wheat	✓ Wheat	✓ Wheat	✓ Wheat
	✓ Rapeseed	✓ Rapeseed	✓ Rapeseed
	✓ Corn	✓ Corn	✓ Corn
			✓ Barley

YPSILON® provides Europe-wide forecasts of crop yield (t/ha) as well as harvest pace for wheat, corn and rapeseed. The standardized national product, published on a web platform, is delivered at national and sub-national level. The service for Germany, also on the web platform, is delivered at national and district-level. The regional service allows forecasts to be made for regions individually selected by the customer and is delivered directly.

The main target groups for the national YPSILON® service are traders and large trading companies, while the regional service is also interesting for mills, regional trading houses, seed multipliers, biogas plant operators, agricultural consultants and large individual farms.



European and German service as seen on the website. Europe is delivered on national (19 countries) and sub-national (44 regions) level, Germany on national and district level (max. 268 districts, depending on crop type).

The YPSILON® service includes many measured variables and current information, such as satellite data (mainly Sentinel-2), weather data (current and forecasts but also historical) and information about soil conditions and topography. Also, long-term statistics on the cultivated area of different crops are used to optimize the calculations for the current season. For Germany alone, about 3000 satellite scenes and 10TB of satellite data are processed and stored for the winter wheat growing season.



INPUT DATA

Among others, satellite imagery, weather data, soil, topography, and agricultural statistics are used for yield forecasting



PROCESSING

In order to deliver relevant and up-to-date forecasts, cutting edge cloud technologies are implemented in the remote sensing processing chain

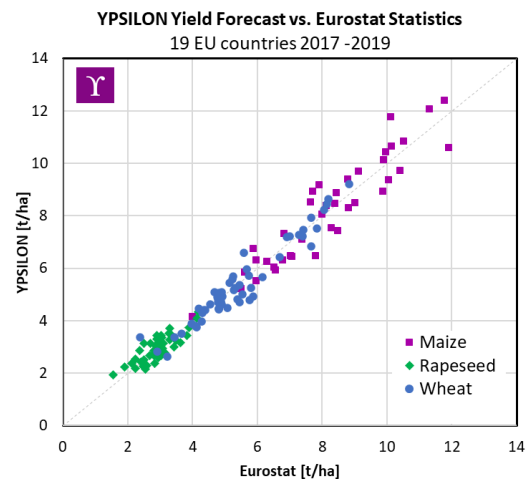
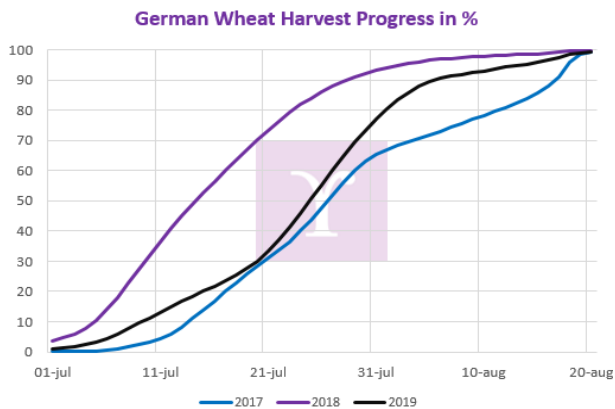


YIELD FORECAST

Up to date satellite images and weather data are integrated into a physical crop growth model for yield prediction in tons per hectare

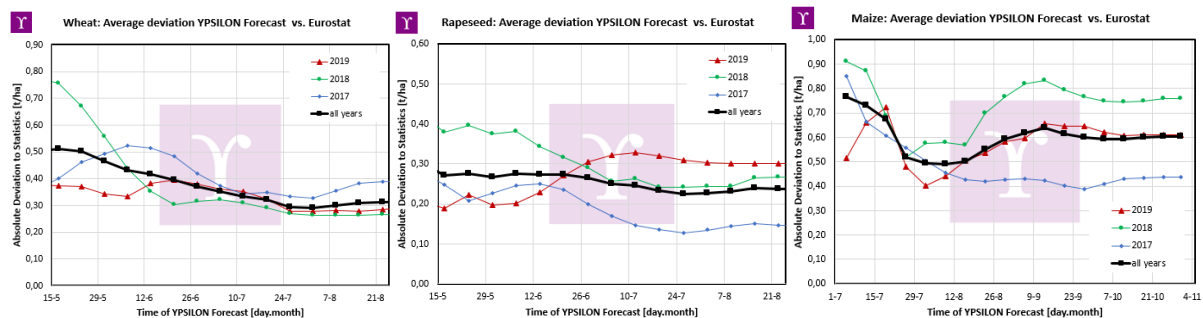
YPSILON® uses a new, crop-specific representative sampling method with hundreds of thousands of samples. Through the use of satellites, spatially limited events such as late frost, drought and heat will also be recorded and their effects quantitatively taken into account.

As it tracks each stage of the crop via satellite, YPSILON® also reports the harvest pace of wheat, corn and rapeseed in the EU and even on a regional level. The harvest pace monitor shows if the harvest is running behind or ahead.



Harvest progress in Germany 2017-2019 and YPSILON® yield forecasts comparison to Eurostat yields

The accuracy of YPSILON® in Europe has been tested for rapeseed, corn and wheat for three years against standard market forecasts and official statistics. The results were compelling, as both yield declines and peak harvests were predicted early on. In the drought year 2018, for example, YPSILON® in Germany predicted the later yield with high accuracy in the third decade of May, six weeks ahead of the previously established methods.



Average deviation of YPSILON® forecast against Eurostat yields after season



Delivery

YPSILON® for the European and German services delivers weekly forecasts in the browser, clearly and attractively visualized on the website: <https://ypsilon.services/>

Service start in 2020 is the 18th of May.

Delivered products

YPSILON® is divided into European, German and regional forecasts. At all product levels, yield forecasts are available for the crop types

- wheat
- rapeseed
- corn
- and in the custom offer also barley

from 8 weeks before the harvest.

Additionally, the harvest pace is delivered, which indicates the proportion of areas already harvested at the selected level.

Prices for the yield prediction service YPSILON®

In 2020, the service costs start at 10.000 EUR/season, depending on which product, how many countries and commodities you would like to track. What do you get:

- ✓ **Access to our webportal** (up to 10 people), with weekly updated yield projections and harvest pace monitoring.
- ✓ **Access to all backtest results** (2017-2019), yield forecasts on national and regional level, harvest pace monitor on national and regional level
- ✓ **Weekly updates**

For further pricing details please contact us!

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>>> Register at [www.ypsilon.services](https://ypsilon.services/) for a free demo <<<



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