

Location	Belgium, Czech Republic, France, Germany, Luxembourg, Poland, the Netherlands
Contractor	BasFood
Period	2008

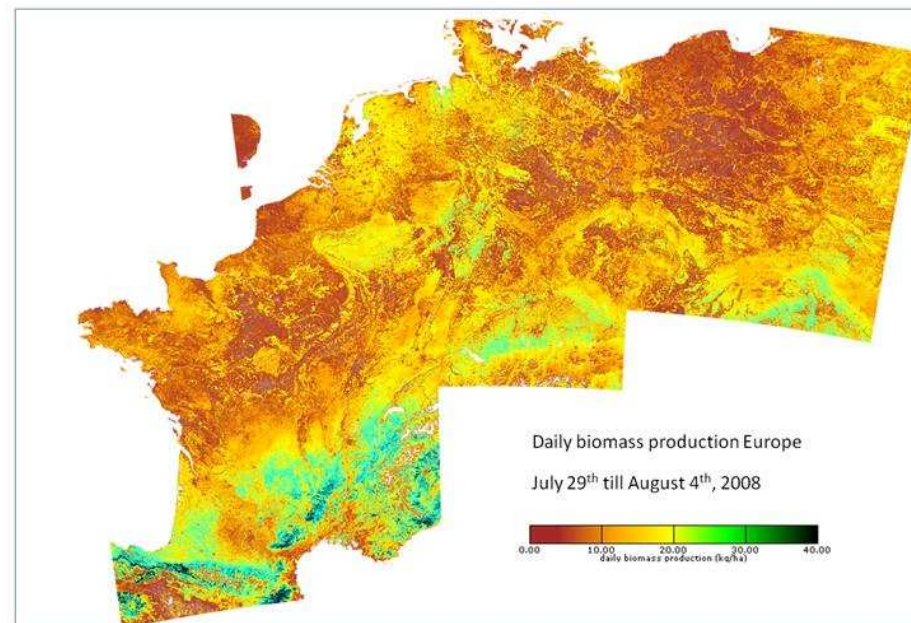
Scope of the project

Two modern techniques make it nowadays possible to provide highly accurate, detailed and reliable crop data that is available every week during the growing season. The first technique is remote sensing: satellites routinely monitor the earth's surface and acquire relevant information. Using the ETLook algorithm the satellite information is translated to crop data. The second technique is the internet that brings the data acquired from ETLook directly to the user by using a web portal.

Study approach

The study focuses on the crops potatoes and wheat. Existing land use maps of the JRC were used to discern arable land from other land uses. The final crop classification was based on ResourceSat-P3 data. Two field campaigns were organized to collect ground truth data.

ETLook is an algorithm evolved from the SEBAL model and is capable of producing the same outputs as SEBAL. Unlike SEBAL, ETLook can be applied for very large areas, even up to continental scale. 250-m MODIS composites of Europe (Belgium, Czech Republic, France, Germany, Luxembourg, Poland, the Netherlands) were acquired on a weekly basis to serve as input for ETLook. Outputs of ETLook are (among others) biomass production and actual evapotranspiration. Potato and wheat yield were derived from the biomass production



Daily biomass production

Results

The first result was a crop classification of wheat and potato at 250-m resolution. For all potato and wheat fields ETLook provided farmers with actual crop growth information on a weekly basis. In this program farmers received ten growth parameters, such as crop evaporation, nitrogen content, biomass production, and yield figures.

Conclusions

The program showed satellite information in combination with the ETLook algorithm can be successfully applied on an operational basis to supply farmers with up to data information on crops. For more information, please visit the website www.CropLook.com.