



# DEMMIN

## Durable Environmental Multidisciplinary Monitoring Information Network

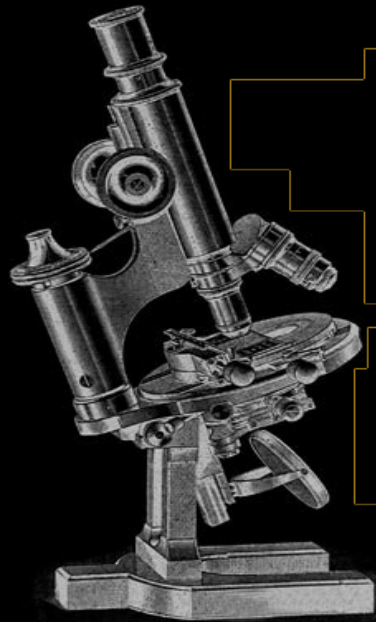
German Aerospace Center (DLR)  
German Remote Sensing Data Center (DFD)  
Department of Ground Segment (BN)



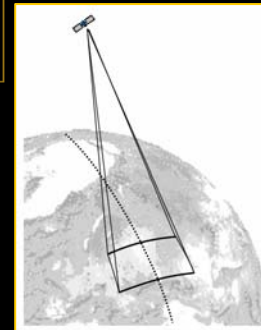
# Topics

- Automation – Prerequisite for monitoring and precision farming
- DEMMIN-EU test site for calibration, validation, and investigation
- Remote sensing for precision farming and environmental Monitoring
- Potential cooperations





**CATENA**



Calibration

Identification of the Region of Interest

Atmospheric Correction

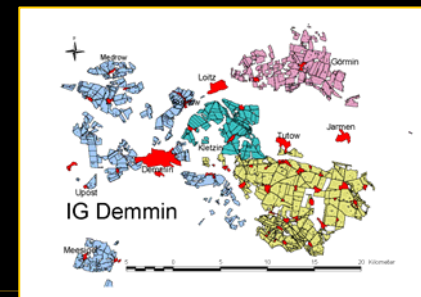
Geo-Correction

Object Identification

Thematic Processor

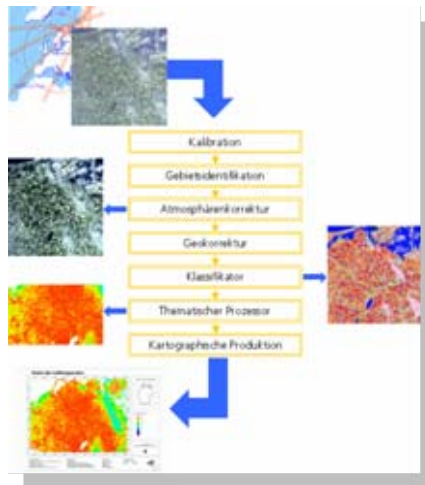
Cartographic Production

**DEMMIN**



## CATENA

- Automated processing chain for deriving value added remote sensing products
- Test platform for new processors and value added products for forest and agriculture



**Products**

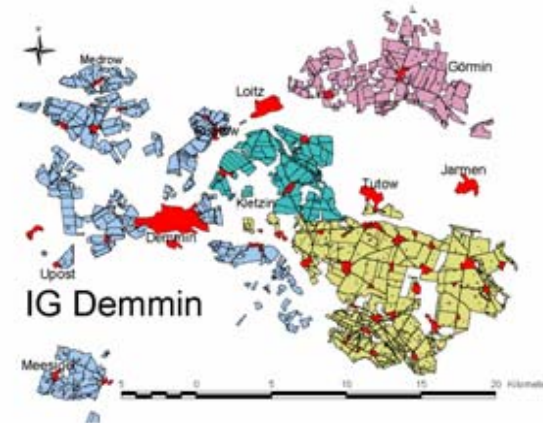


**Validation**



## DEMMIN

- Test site for calibration and validation of national / international remote sensing missions
- Test site for supplying environmental data for developing of processors and practice test

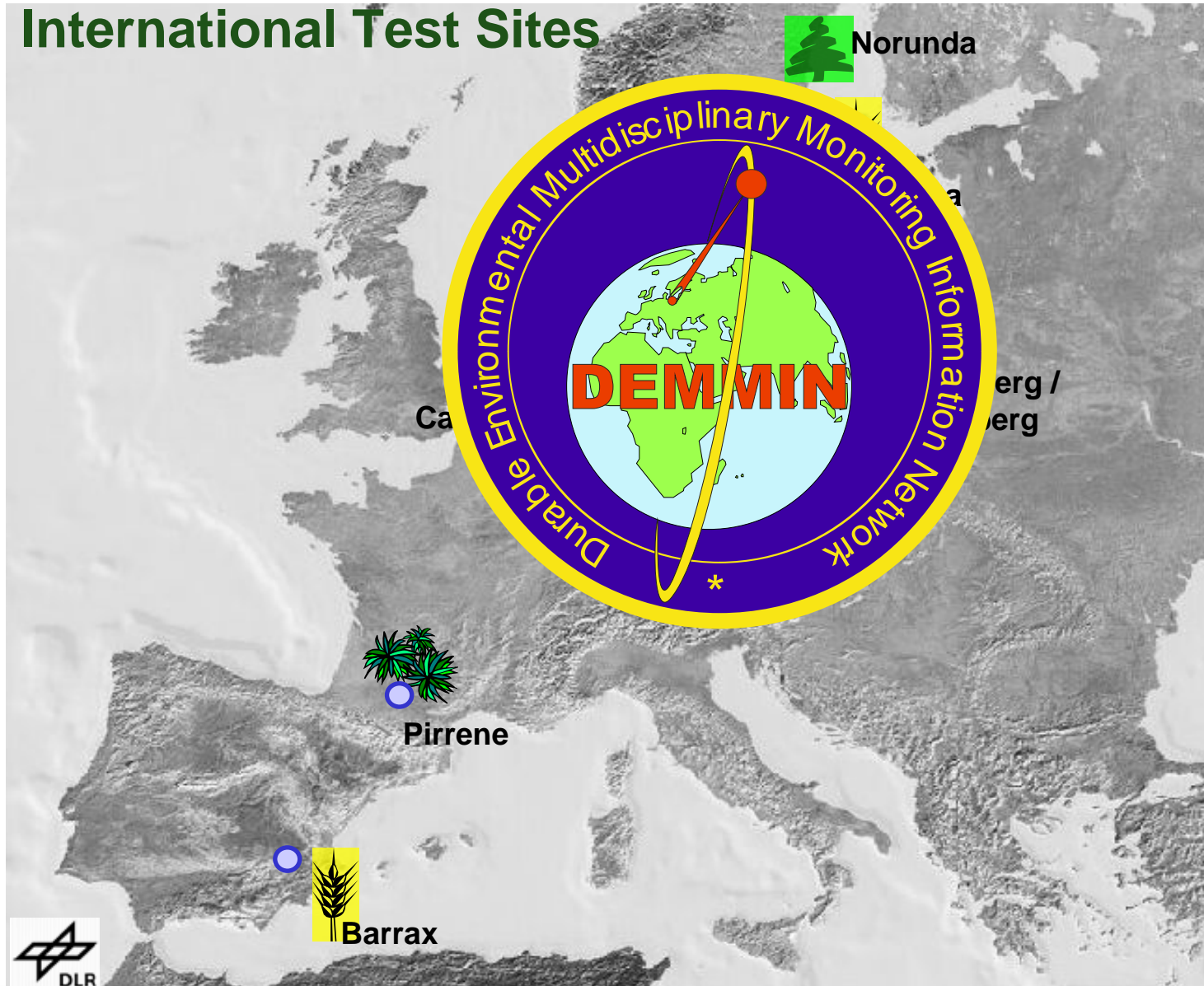




# Why Do We Need Automation ?

- Operational data interpretation
- Large data quantity processing(not only fair weather remote sensing)
- Standardization of production / products
- Objective (comparable) results
- Cost minimization for product generation
- Complexity of products
- Error flag information for individual scenes

# International Test Sites







## Operational Test Sites in Europa

### Thematic

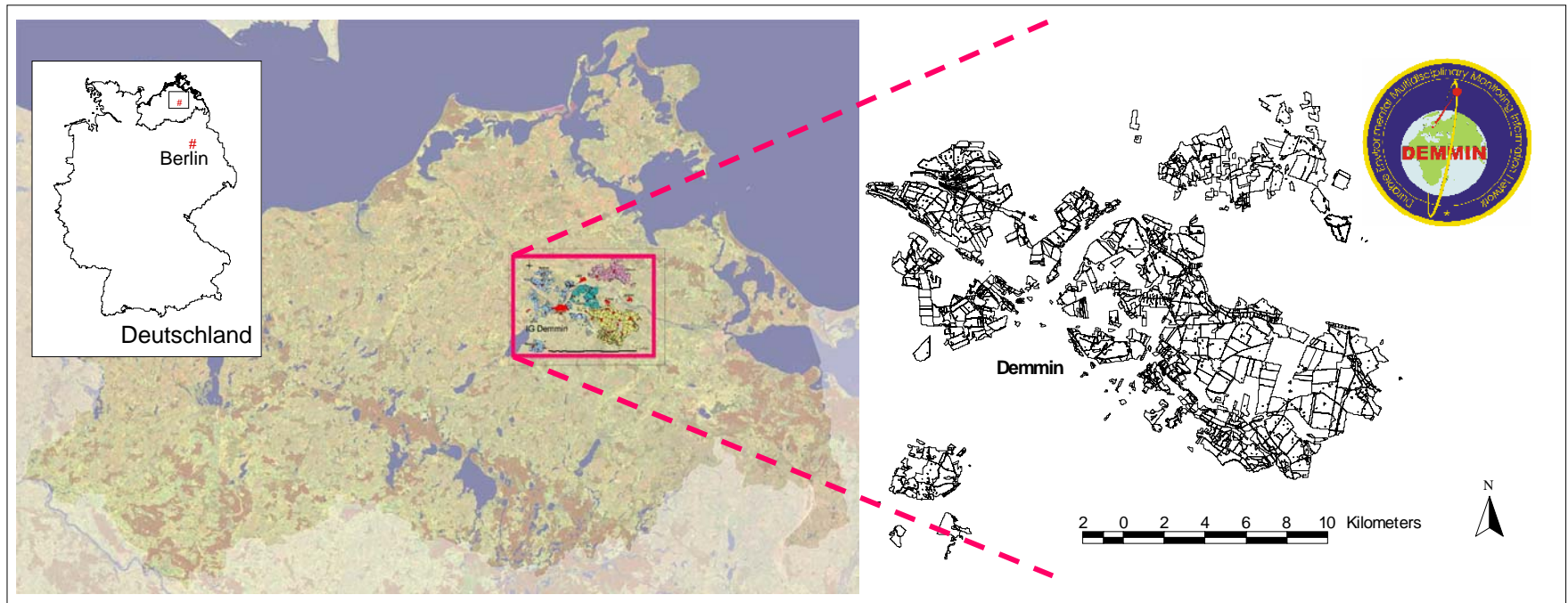
-  RS
-  Meteorol.

### Land Use

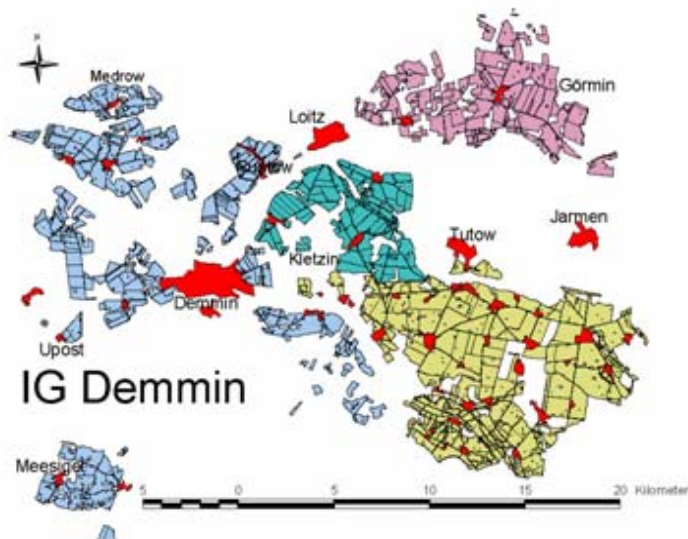
-  Pasture
-  Natural Vegetation
-  Field
-  Forest



# Durable Environmental Monitoring and Management Information Network (DEMMIN)



# Test Site of DLR in Cooperation with IG-Demmin



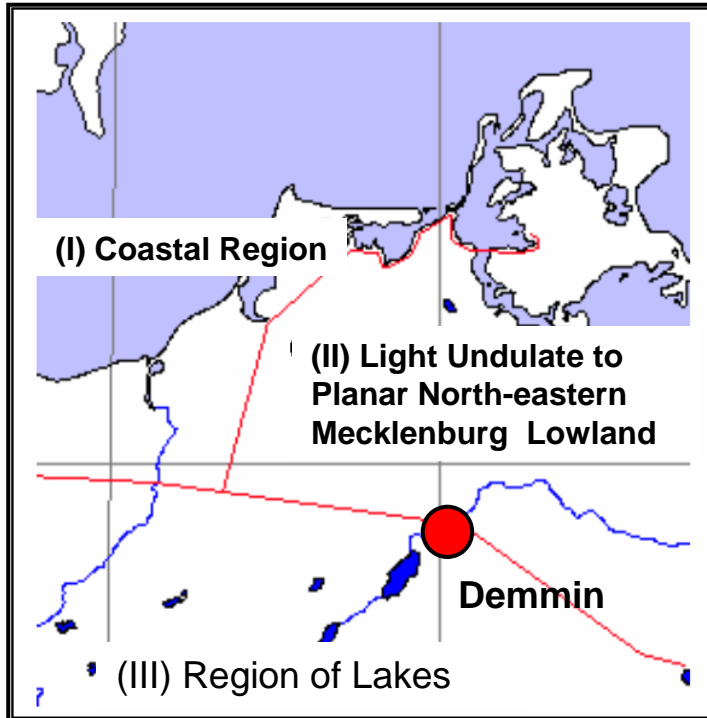
## Characteristic:

- approx. 25,000 ha
- 2 Agricultural Joint-Stock Companies
- 3 Agricultural Ltd's

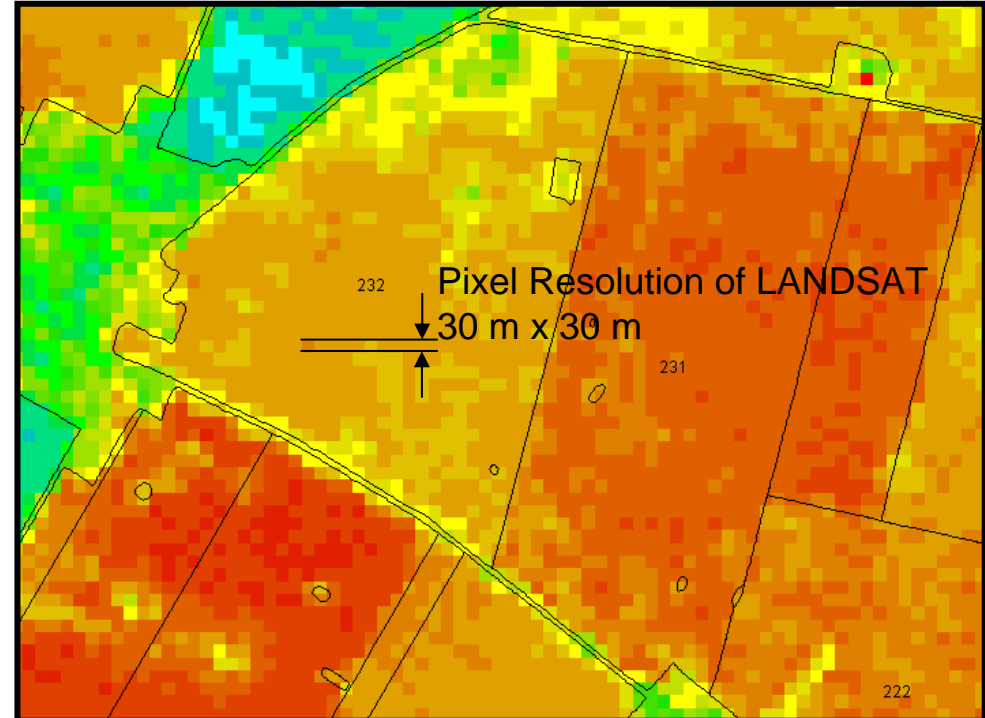




# DEMMIN – Site Conditions and Advantages

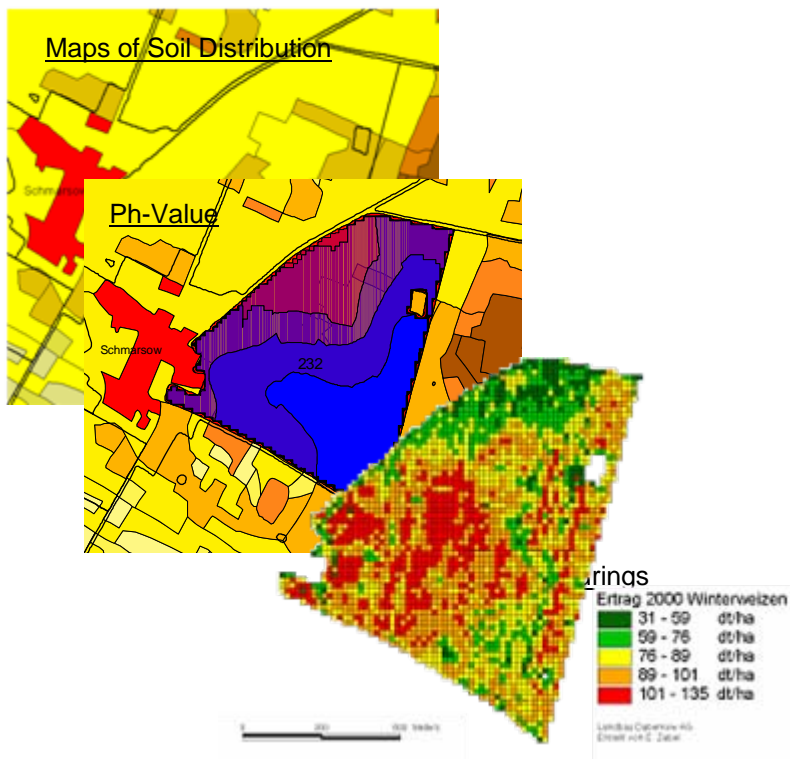


Map of dominating Landscapes in the Test Region DEMMIN



Pixel Resolution of LANDSAT 7/ETM+ vs. Field Size

# Available In-situ Data for Validation of Processors, Processing Chains, and Value Added Products



## ***Digital quasi-static Data***

- Soil maps
- Land parcel - Field maps

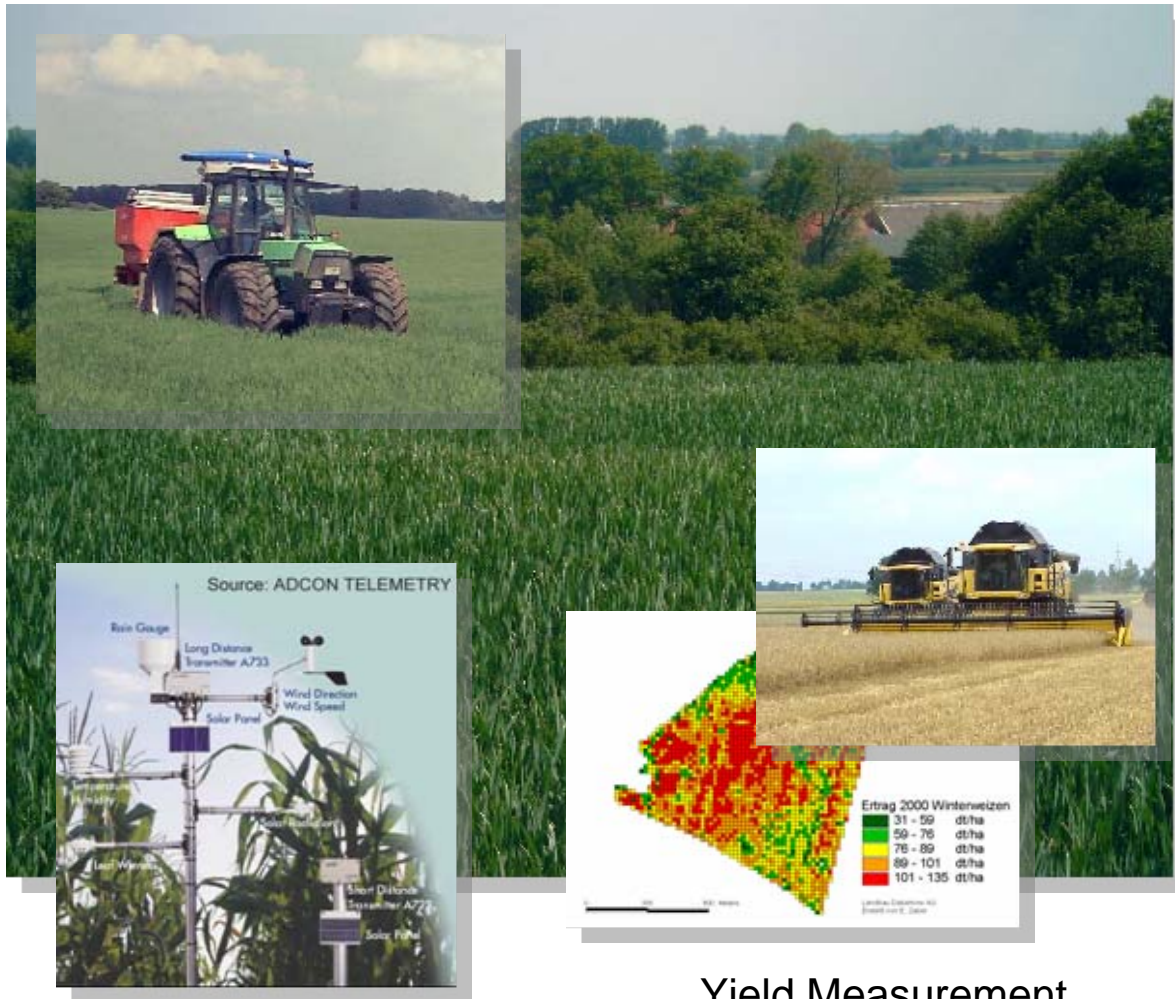
## ***Digital dynamic Measurements / Data***

- Yield mapping
- Application maps
- Mapping of macro and micro nutrients
- Measurements of vegetation stages
- Nitrogen-sensor measurements
- Agrometeorological data (15

## ***Planned Measurements***

- In-situ measurements
- Sites for calibration

# Available In-situ Data



## Field Campaigns

### Vegetation Height



### Vegetation Coverage



## Yield Measurement



# Thank You for Your Attention

More Information:  
e-mail: [Erik.Borg@dlr.de](mailto:Erik.Borg@dlr.de)  
phone: 03981 480 183