

# JECAM Argentina: San Antonio de Areco

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## Study Area

•Location: Rolling Pampas (Buenos Aires province)

•Soils: composed mostly of Mollisols (deep A horizon -30 cm- with high SOM)

•Topography: Gently rolling (ca. 2%)

•Climate and weather: Humid temperate (annual precipitation: 1000 mm)

•Crop calendar:

- Early soybean: November/April

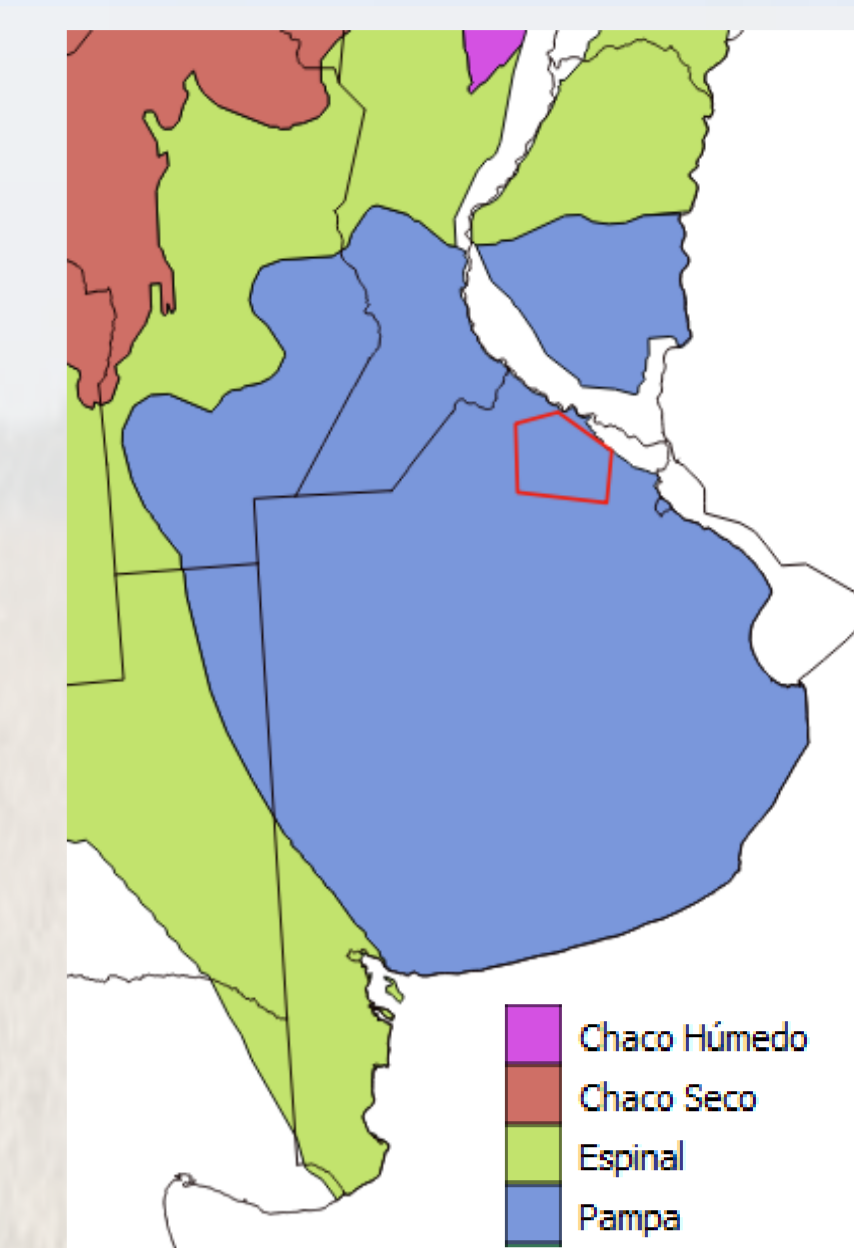
- Wheat-soybean: June/December – May

- Early Maize: October/March

- Late Maize: December/May

•Agricultural systems: No till continuous agriculture

•Field size: mean 20 Ha



## Objectives

1.- Generate consistent cal-val dataset for remote sensing applications

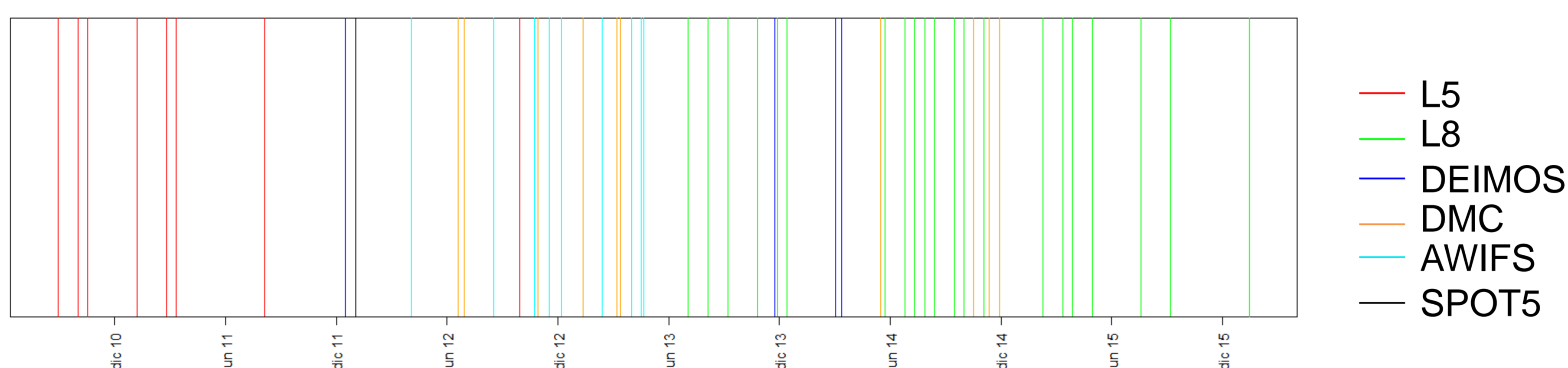
2.- Description of land use and crop rotations.

3.- Estimation of biophysical parameters with optical and radar data.

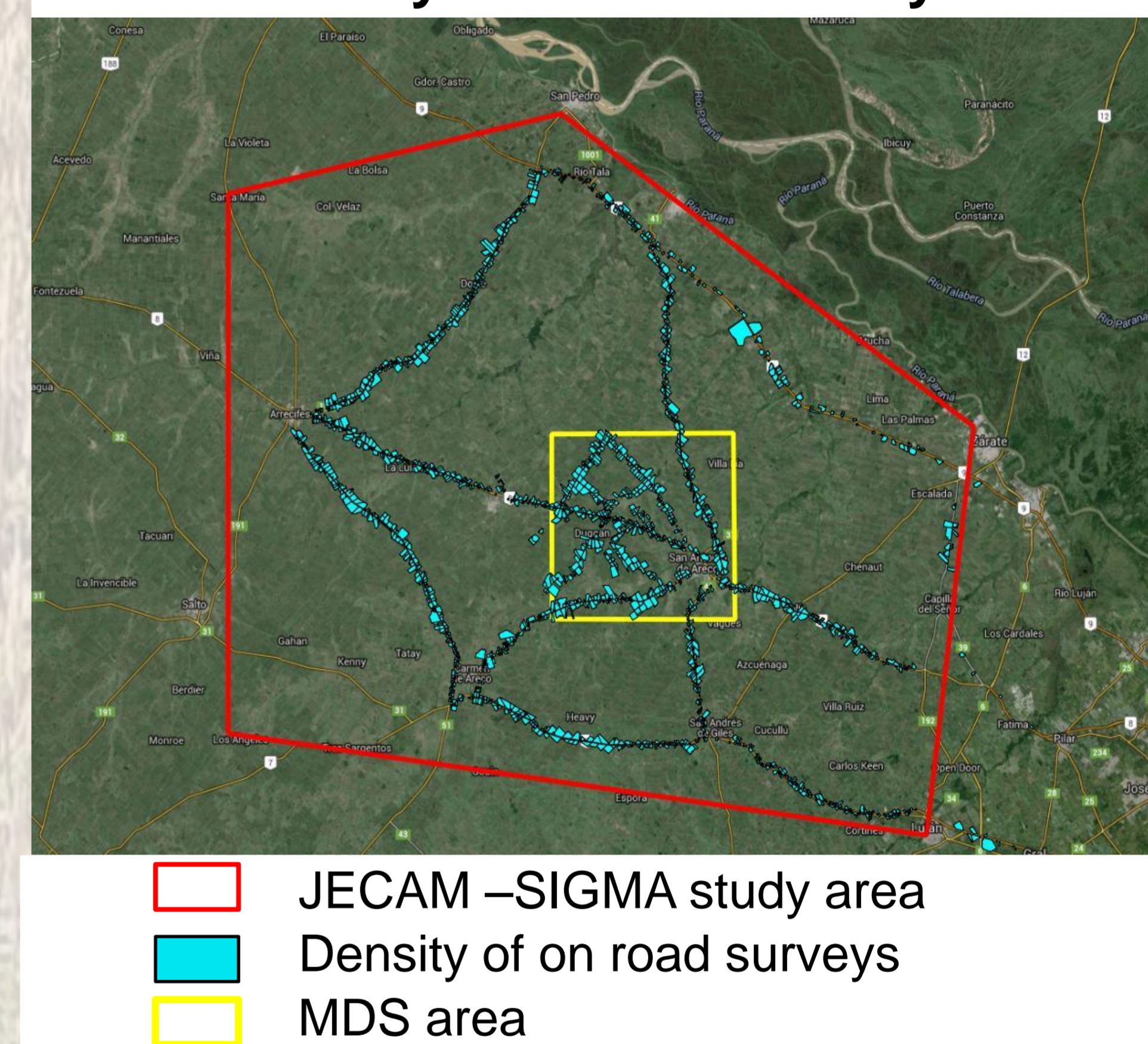
## Results

- 6 years of high density land use information (crop type and no cropland land uses).
- 3 years of crop biophysical parameters measurements (wet / dry biomass, fPAR, LAI, yield)
- Acquisition of multiple HR optical and X, C and L band RADAR images

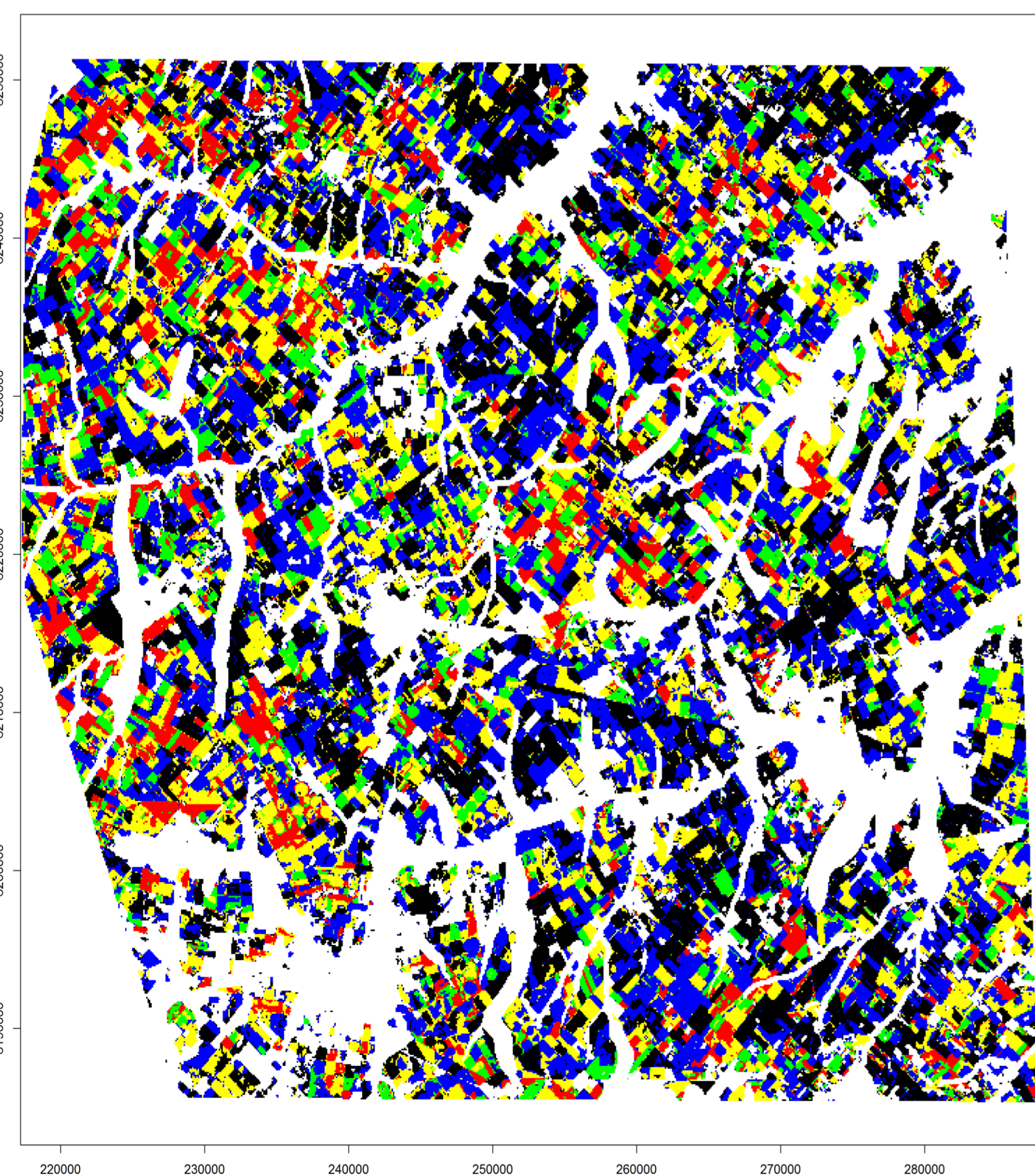
### Cloud free acquisitions of HR optical images over JECAM area



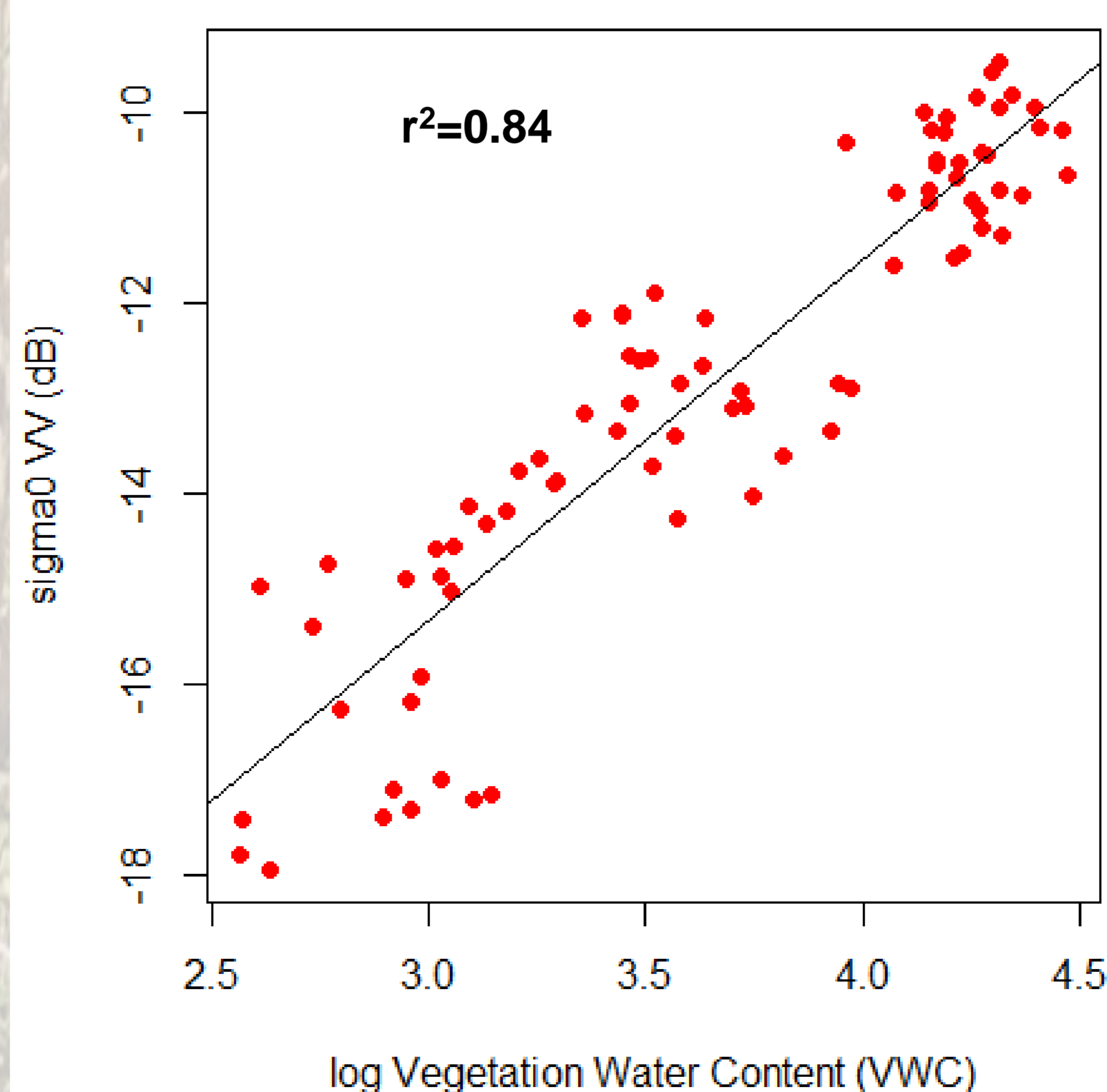
### Density of on road surveys



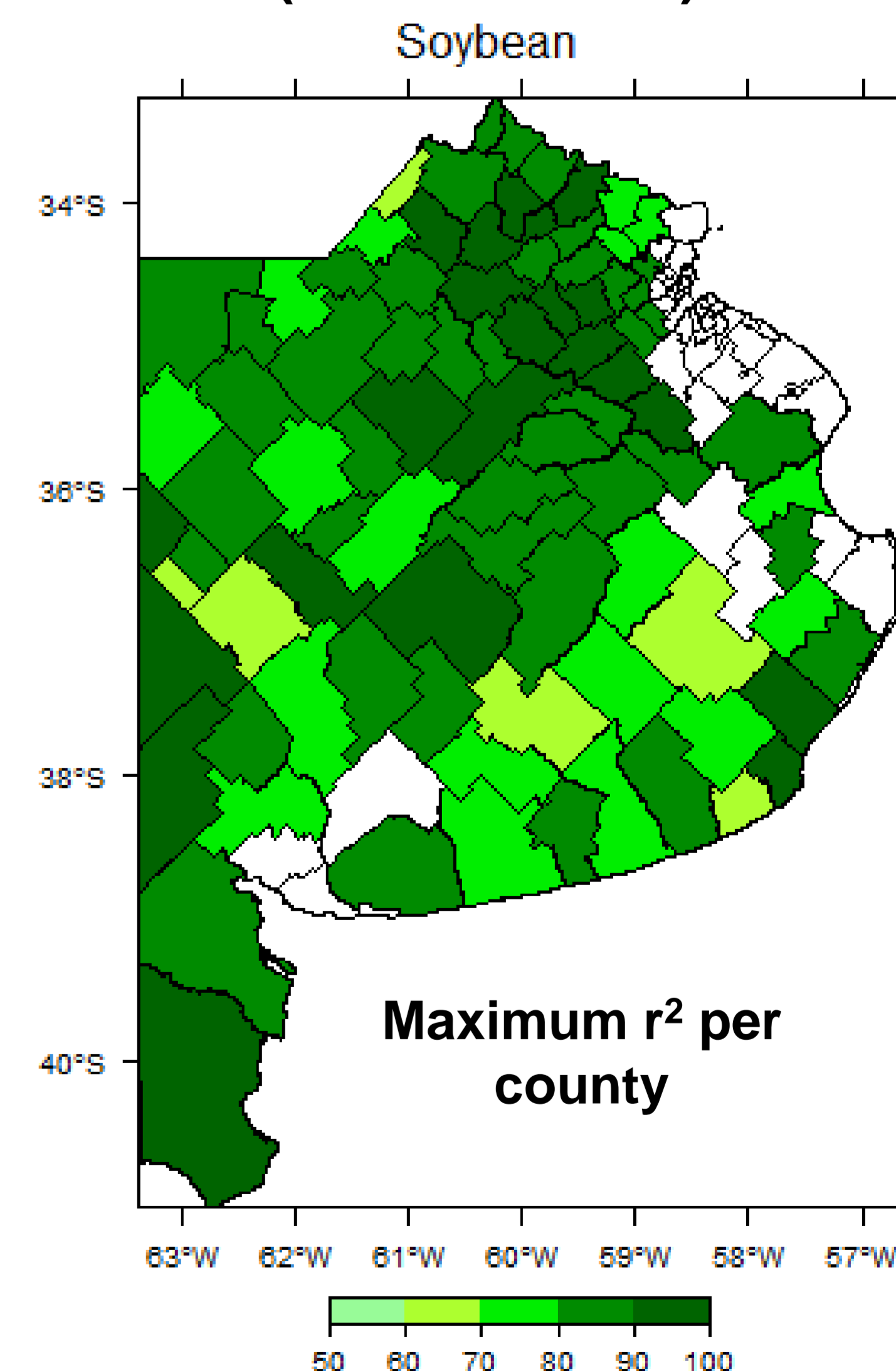
### 5 years crop rotation map Years with soybean monoculture



### RADAR: RADARSAT-2 over soybean crops



### Yield estimation at county level (Buenos Aires)



## Next steps

- Move from local to regional level (province / country): Crop area and yield estimations
- Intercomparison studies for cropland mapping: sampling method, different data sources
- Fusion of optical and RADAR to improve classifications
- Improve estimation of real evapotranspiration (as water stress index)