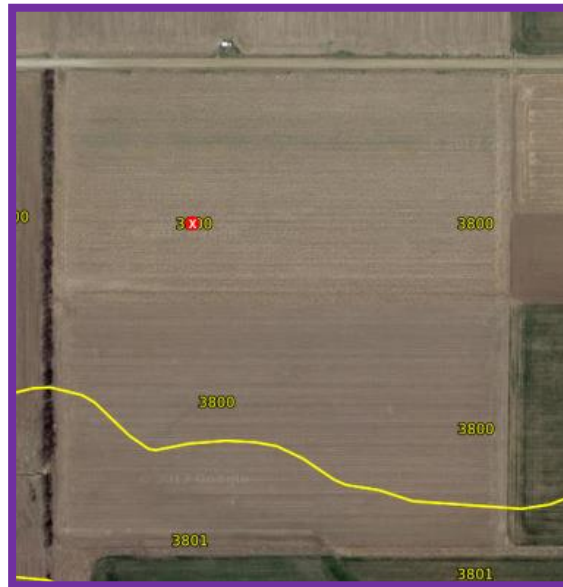


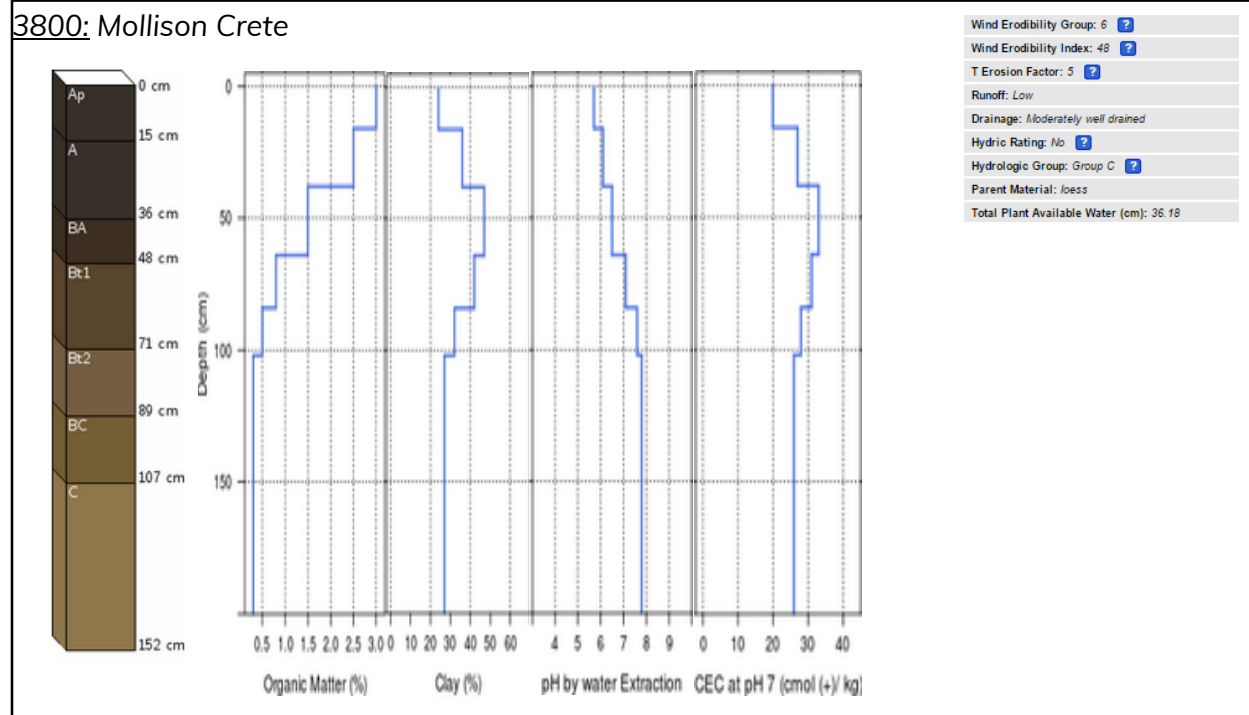
Flickner

Irrigated, 38 acres

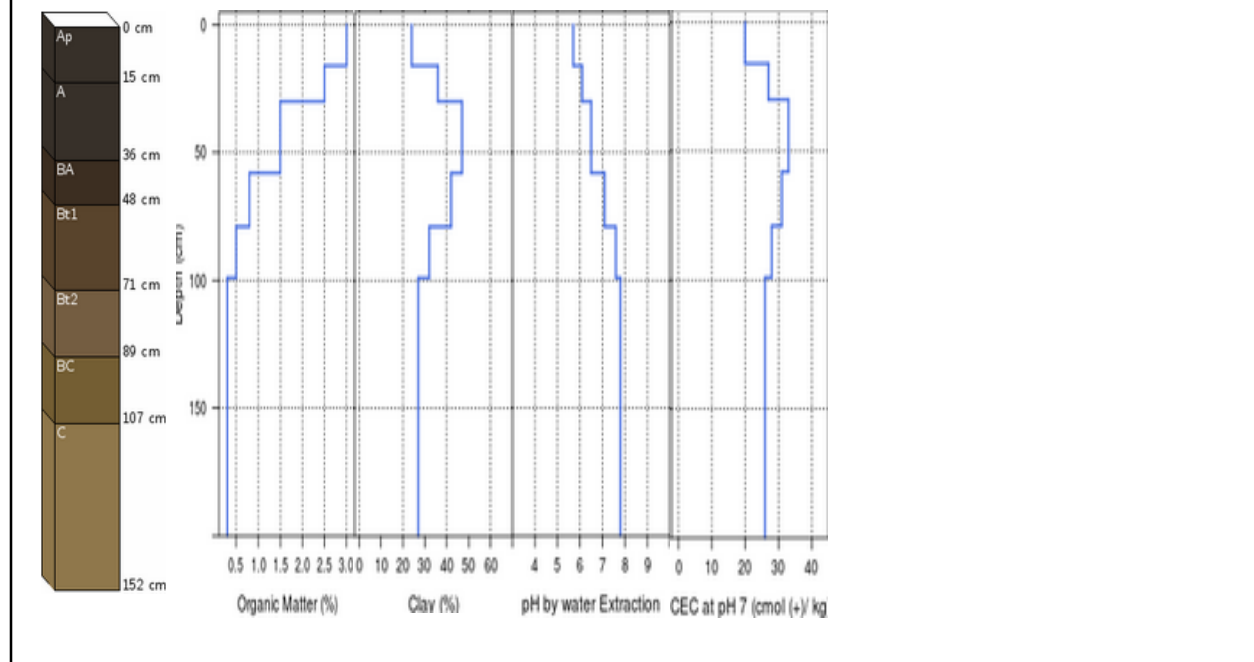
SSURGO



3800: Mollison Crete



3801: Mollison Crete



Landscape characterization

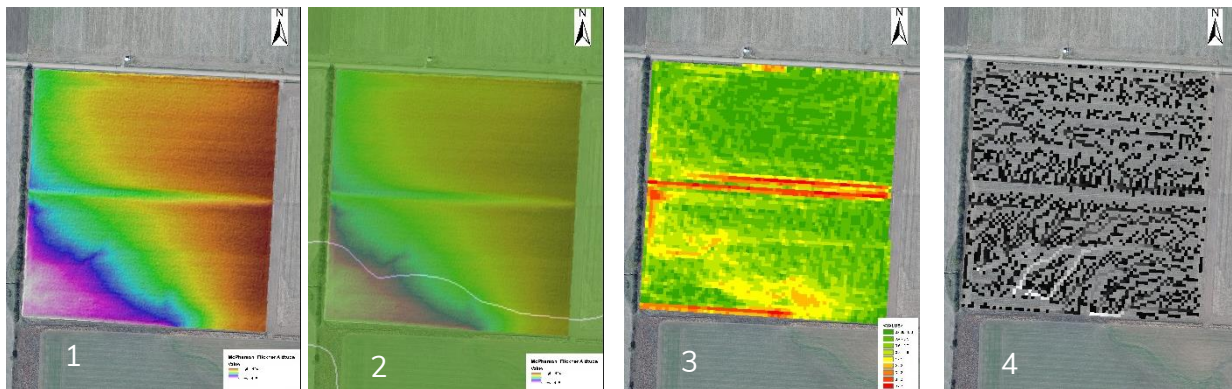


Figure 1: Altitude (meters)

Figure 2: Altitude and SSURGO

Figure 3: derived slope (degrees)

Figure 4: flow accumulation

Satellite data Analysis:

Summer crops 2014-2015-2016

South-North paired corn-soybean fields
2014:

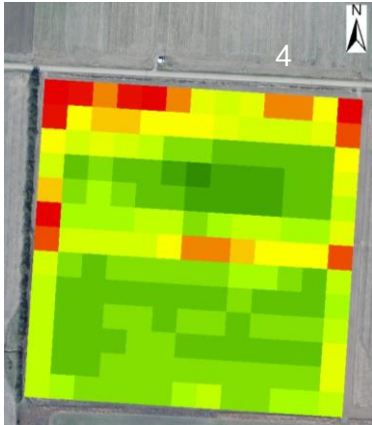


Figure 4: NDVI L7 summer 2014

2015

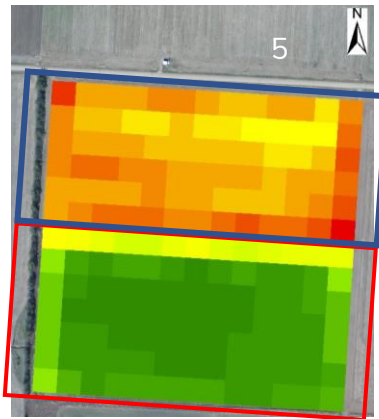


Figure 5: NDVI L8 summer 2015 August
Corn / Soybean

2016

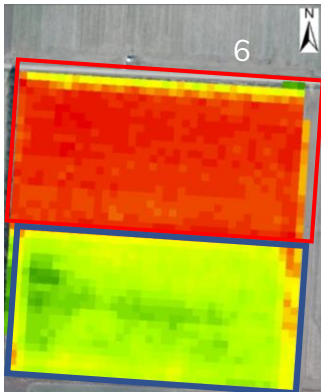


Figure 6: NDVI S2 early June 2016

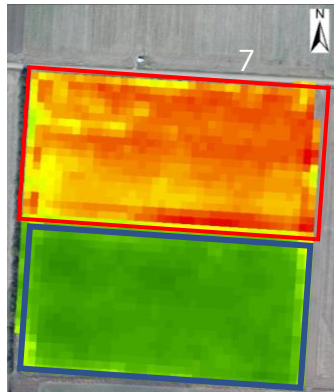


Figure 7: NDVI S2 Late-June 2016

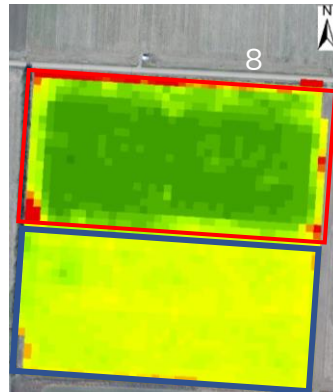
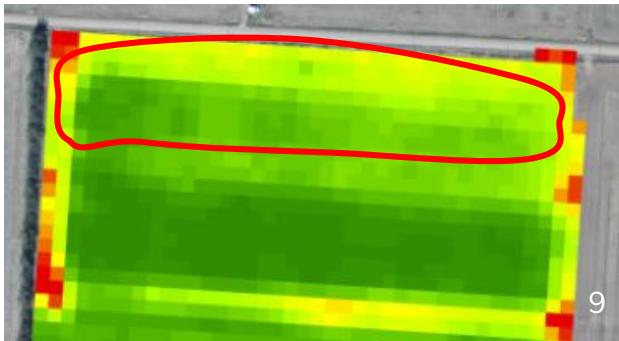


Figure 8: NDVI S2 mid-August 2016

Soybean / Corn

Preliminary ISO- Data Clustering:



Early season 2016 soybean showing some visual effect on the south region of the northern block.



Early season 2016 Corn showing some visual effect on the west region of the southern block.

A complete analysis didn't evidence a significant zoning effects on 2014, 2015, and 2016 data.

Season 2017

NDVI SATELLITE IMAGERY:

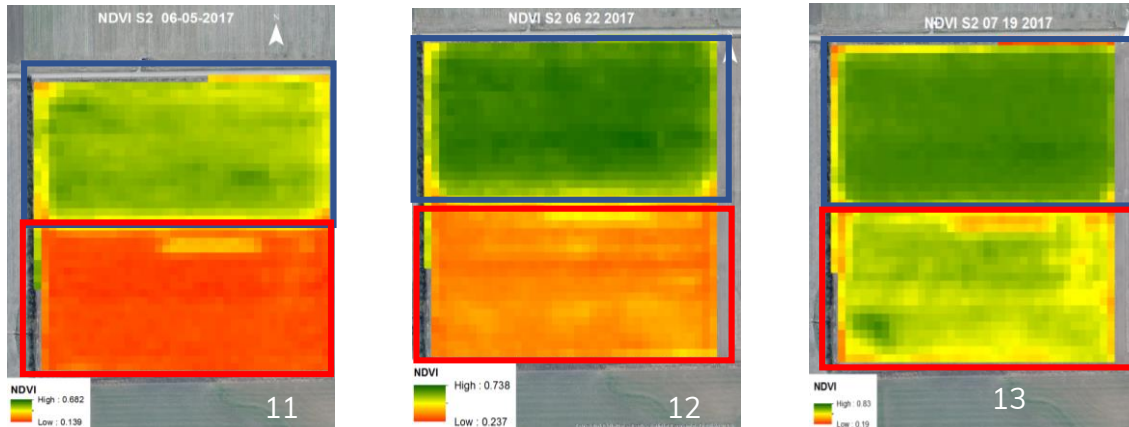


Figure 11: NDVI S2 June 5th

Figure 12: NDVI S2 June 22th

Figure 13: NDVI S2 July 19th

Corn / Soybean

VOLUMETRIC WATER CONTENT:

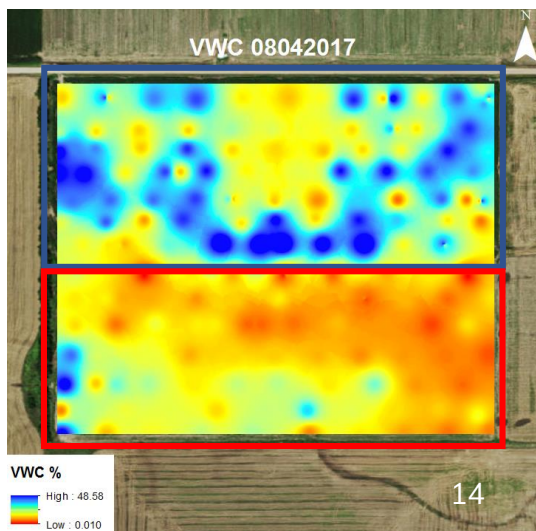


Figure 14: Volumetric Water Content.

Corn with deep irrigation / Soybean dry